DEPARTMENT OF THE ARMY
Corps of Engineers, Omaha District
215 North 17th Street
Omaha, Nebraska 68102-4978

DM 415-1-6

CEMRO-CD-C

Memorandum
No. 415-1-6

1 September 1992

Construction
COST REIMBURSEMENT CONTRACT MANAGEMENT

1. Purpose. This memorandum establishes procedures and outlines responsibility for contract administration and financial management during the construction phase of cost reimbursement contracts and delivery orders.

2. Applicability. This memorandum is applicable to all elements within the construction function, and to all elements within the Omaha District with responsibilities related to cost reimbursement contract management during the construction phase of a project. The procedures apply to all cost reimbursement contracts and delivery orders with administrative contracting officer authority (ACO) assigned to the Omaha District. All types of construction phase activities, including, direct funded military construction, reimbursable funded military, operation and maintenance construction, hazardous and toxic waste cleanup, and work for others are included in the scope of this memorandum.

3. References.

a. 31 U.S.C. Section 665
b. Federal Acquisition Regulations (FAR), Part 31
c. EIG Inspection Report, NTC-TS-001, Nontraditional Contracting, 11 April 1991, Mr. Ted Stryker
d. Defense Contract Audit Agency Pamphlet (DCAAP) 7641.90, Guidance for New Contractors, April 1986
e. ER 5-7-1 (FR), Project Management, Advance Copy dated 1 March 1991
f. ER 15-1-21, Cost Contract Management Evaluation Team Activities and Procedures, 12 June 1981
g. DM 415-1-1, Reporting Construction Progress
h. DM 415-1-4, Contract Administration
i. Construction Management Manual, Omaha District
j. Contract Management System Users Manual, Version 1.0, June 1990, Omaha District, U.S. Army Corps of Engineers
k. "Cost Reimbursement Type Construction Contracts Guide," FY 91 Edition, Volume 1, Corps of Engineers, CE Training Management Division, Huntsville, AL
l. Cost Reimbursement Contracting John Cibinic, Jr., Ralph C. Nash, Jr., Government Contracts Program, George Washington University

4. Terms and Definitions. Definitions of terms used in this

memorandum can be found in appendix A.

5. Policy. It is the policy of the Omaha District that construction cost reimbursement contract management will be performed in accordance with sound principles and procedures as outlined by the Department of Defense, the Office of the Chief of Engineers, and standard engineering management and accounting practices. The Chief of Construction Division is responsible for implementation of this policy.

6. General. The overall objective of any project is a quality product, delivered on time, and within budget. However, the common and fundamental challenge of cost reimbursement contract management is controlling the level and nature of the contractor's expenditures. This memorandum addresses procedures for cost control. Construction quality management and property management are not specifically covered. All aspects of construction management, including quality management and cost and schedule control, require a close relationship between the Corps of Engineers' field office and the contractor's representatives. Additionally, for cost control of cost reimbursement contracts or delivery orders, an integrated system of administrative and budgetary controls involving full cooperation of all responsible personnel within the District and field offices is required.

7. Responsibilities. Nothing in this memorandum shall detract from the authority and responsibilities afforded by warrant to the ACO. Neither shall it detract from the delegated authority of the Chief of Construction Division in the role of activity director for military construction and sub-activity director for reimbursable work and work for others. This memorandum is provided to define procedures, clarify responsibilities, and facilitate integration of functional activities. There is no attempt to assign specific responsibility for functions and tasks beyond those currently provided. Responsibilities are generally only defined within the construction function. Delegation of authority and responsibility may vary based on the contracting officer (CO) or other official's discretion on individual contracts.

8. Procedures.

a. General. The Omaha District recognizes the importance of a strong contractually based performance measurement system for successful management of cost reimbursement contracts. Also recognized are the fundamental aspects of sound management control. The establishment of procedures under this memorandum are, therefore, addressed under the following recognized cost

reimbursement contract management requirements for good management control:

(1) Thorough planning.

(2) Information broken down by project.

(3) Baseline establishment and control.

(4) Measurement of accomplishment against the plan with summarized reporting.

(5) Variance analysis.

(6) Corrective action.

(7) Integration, controls, and automation.

(8) Consents and approvals.

(9) Technical direction, contract modifications, and claims.

(10) Final audit and fiscal closeout.

b. Planning. Planning is essential for successful cost control and cost reimbursement contract management. Key construction personnel in the planning phase are the construction technical manager, construction contract manager, and field office personnel. Representation by an individual responsible for cost control management in the field office is imperative during the planning process.

(1) Selection Boards and Negotiation Teams. Generally the critical planning period is prior to the source selection and subsequent negotiation. Key construction personnel must be included on these boards and work teams. It is not necessary, however, that the same key personnel be on both boards or work teams. The following breakout would be acceptable:

Source Selection Board	Construction technical manager and field office representative
Negotiation Team	Construction contract manager and field office representative

The actual orders or assignment of representatives is made by the source selection official and included in the source selection plan. Individual cost reimbursement delivery orders within the

umbrella of an indefinite delivery contract, and some contracts with provisions to add additional reimbursable projects by modification, do not require separate solicitations. However, they do require separate negotiations. Typically, these negotiations are led by contracting personnel. If so, it is the responsibility of the construction technical manager to inform the field office of upcoming negotiations and coordinate their representation during negotiations of estimated cost and supplemental advance agreements.

(2) Documents. Active involvement in the development or review of the documents is part of the planning function. Responsibility for construction involvement in the planning process is defined as follows:

Item	Responsible Person	Function
Plans and specifications	Construction technical manager (TM)	Review, and coordinate review by field and district office.
Contract clauses	Construction contract manager (CM)	Review, and coordinate review by field and district office.
Justification and Approval Document	Construction CM	Review and coordinate with Contracting Division and Engineering Division.
Solicitation plan	Construction TM	Coordinate development with Contracting Division, Engineering Division and project manager.
Request for proposal	Construction TM	Coordinate Construction Division involvement and provide advance notification to the field office.

Item	Responsible Person	Function
Source selection plan	Construction TM	Coordinate Construction Division involvement for selection and negotiation teams and perform, or assist in drafting.
Proposal evaluation	Selection team members	Attend selection team meetings, perform designated team duties, and debrief proposal losers.
Government estimate	Negotiation team members	Coordinate category or format requirements with Engineering Division. Format estimate into spreadsheet for cost analysis and comparison with contractor proposal.
Negotiation plan	Negotiation team members	Coordinate development with team members and Contracting.
Advance agreements	a. Selection team b. Negotiation team members	a. Provide input into appropriate advance agreements. (See appendix I) b. Review and negotiate appropriate changes.
Request for Proposal	Negotiation team members	Provide Government estimate work breakdown structure and other special requirements to contractor in RFP letter to contractor.
Price negotiation memorandum	Negotiation team members	Complete appropriate portions of memorandum as assigned by negotiation team chief.

Item	Responsible Person	Function
Original budget current working estimate	Negotiation team members	Identify estimated contract (or delivery order) costs to specific project funded line items.
Contract baseline estimated cost	Negotiation team members	Develop detailed cost analysis spreadsheet and initialize work breakdown structure.

(3) Special Meetings and Visits. Special efforts may be required if the pending contract action involves a rather large dollar amount or if a contractor without previous experience on similar work in the district is selected.

(a) Pre-proposal Conference. For new contract solicitations, it is often beneficial to hold a pre-proposal conference for potential offerors. The need for the conference should be determined during early stages of planning and design. The construction technical manager is responsible for Construction Division recommendations and involvement. The need for sound project level financial management by the contractor should be addressed at this conference. Records of the conference should be kept and distributed to all plan holders.

(b) Contractor Office Visit. If the contractor selected for negotiations is relatively inexperienced in Government cost reimbursement work, or the contract is of significant dollar volume, a contractor office visit should be held. The construction contract manager is responsible to arrange the meeting to include field representative(s) and a finance or audit representative. The purpose of the visit is to determine the contractor's cost and managerial accounting capabilities and operating procedures. Also, the purpose is to define more clearly Government cost reimbursement requirements. Appendix B, provides a listing of typical items to address.

c. Information Broken Down by Project. Many construction phase contracts, and some delivery orders, are funded by more than one project appropriation. Accountability for performance with our customers, and compliance with appropriation law and related regulations, make it essential that costs and fees on cost reimbursement contracts be allocated to the appropriate project funds item within the contract.

(1) The Current Working Estimate. Breakdown of project funding is identified on the current working estimate (CWE) consistent with receipt of funds from individual customers. Occasionally, still further line item breakdown of project funding is established in the CWE based on customer request. For military projects, individually funded projects are identified by the first six characters in the Corps of Engineers' accounting system. For example, "KA2860" may designate FY92 military construction funds for a specific facility. The next 4 characters designate further line item identification within a given funds type. For example, "KA2860**2201**" may designate a unique line item for landscaping requested by the customer. This level of accounting information appears on the CWE and must also be allocated appropriately to estimated and actual construction costs.

(2) Cost Control and Accounting Systems. Contractor record keeping must also be able to allocate costs to individual project funds within the contract or delivery order. Because most contractor cost and control systems cannot easily relate both WAD category breakdowns and project funded line items, it is often administratively convenient to establish direct cost WADs so they include only one project line item. Any indirect cost WADs or other WADs that involve more than one project funded line item will require the establishment of a procedure to allocate the costs to the appropriate funds (see figures C-2 and C-11). This should be determined during the negotiation of the contract or delivery order estimated cost. In general, it is best to utilize existing standard contractor job order accounting procedures for this purpose. However, it may be acceptable for the contractor or the Government to allocate indirect costs based on predetermined line item splits. This procedure should be coordinated with the Corps of Engineers finance officer and have prior approval of the cognizant audit office. In any event, the initial negotiated estimated cost must be broken out by project funded line item to satisfy the following requirements:

(a) Current Working Estimate. Further, project level information must be initialized in the award CWE.

(b) Recording Obligations. Project allotment numbers must be recorded on the contract and the Government's finance and accounting system as individual obligations.

(c) Government Cost and Control. Project level information and separate line items must be initialized in the CO's cost and control system.

(d) Contractor Cost and Control. Project funded

line items must be initialized in the contractor's cost and control system if more than one type of funds is involved and WADs are not aligned to negate the need for contractor line item accountability. Financial project management procedures are described in more detail in appendix C and appendix D, and further explained below.

d. Measurement and Reporting. Of the three primary construction objectives (quality, on time, within budget), only on time and within budget are objectively measurable and relatable to standard reports. Therefore, measurement and reporting focuses on physical progress, cost and comparison, earned value, and expenditure reporting. WAD procedures for cost control outlined in appendix C shall be used on all cost reimbursement contracts and delivery orders of significant dollar volume and duration. Work Item procedures outlined in appendix D may be utilized in lieu of WAD procedures on contracts and delivery orders of relatively small dollar value and/or short duration. Determinations of appropriateness of either method will be recommended by the Construction Division negotiation team members in conjunction with the ACO to the Chief of Construction Division for final determination. Generally, cost reimbursement delivery orders issued under hazardous and toxic waste (HTW) "rapid response" indefinite delivery contracts need not utilize WAD procedures because of their short duration and relatively small dollar volume. Other cost reimbursement delivery orders or smaller cost reimbursement contracts shall be evaluated on a case by case basis.

(1) Physical Progress. Measuring, controlling and reporting physical progress is a major area of construction management and generally outside the scope of this regulation. Other guidance is available in DM 415-1-1 and DM 415-1-4. It is not expected nor required that physical progress be reported by individual funded projects within a contract or delivery order. Physical progress should be measured, controlled, and reported based on contractor schedule work items that facilitate the construction and completion of the work. In instances where the WAD system is used, it is recommended to measure, control, and report on progress by WAD. Therefore, the WAD breakout must be closely aligned to progress schedule category items, in addition to project funded line item considerations. See appendix C for more discussion.

(2) Cost and Comparison. Cost and comparison reporting is required on all cost reimbursement contracts and delivery orders. Measurement and reporting of actual cost and its comparison requires the establishment of a baseline against which current estimated costs can be compared. The difference between

baseline estimated costs and current estimated costs identifies a variance which may require further analysis. The spreadsheet showing detailed cost analysis comparison of the proposal, government estimate, and the negotiated estimated contract cost is the basis for the original budget baseline (see appendix C for an example). It also establishes standard costs for items of work for later use in variance analysis. Criteria for cost schedule and control must be established prior to award. This is primarily the responsibility of the negotiating team. To support the collection and reporting of budgets, allocations, and actual costs, the contractor and the Government must maintain a cost and control system with capability to relate the following:

(a) Original Baseline Estimated Cost (Negotiated Amount). This is the original estimated cost as negotiated and awarded in the contract or delivery order.

(b) Current Estimated Cost at Completion (EAC) -- (Total Estimated Cost). This is the contractor's current best estimate of the final cost of the work and fee. It includes both completed work and the best estimate for remaining work. Agreement or negotiation of the costs must be performed at each reporting period and at other critical periods.

(c) Performance Measurement Baseline Estimated Costs (Current Budget) -- also known as Budgeted Cost at Completion (BAC). This is the current recognized total estimated cost. It is typically equated to the estimated cost at completion from the previous reporting period.

(d) Current Estimated Cost to Complete (Remaining Work Estimated Cost). This is a new estimate of the cost to complete the remaining work. It is not a simple calculation of the current budget minus current expenditures.

(e) Government Allocated Amounts (WADs). This is an allocation of contract obligated funds by the Government to the contractor further restricting the obligation or expenditure of funds for identified work. These allocation amounts are also tracked and compared to actual expenditures and earned value.

(f) Secondary Level Work Breakdowns (Work items or SubWADs). Individual tasks that comprise the total item of work against which variances are also measured.

(g) Actual Costs to Date (Current Expenditures). Total actual costs to date are accumulated and reported by separate categories (WADs, tasks).

(3) Earned Value. Reporting for management purposes and further identification of cost and schedule performance may require utilization of earned value analysis. Use of earned value analysis and reporting beyond that provided in appendix C, are subject to the discretion of the field office. However, negotiation team personnel should review project management plans for potential reporting requirements using earned value principles or formats. See appendix H and ER 5-7-1 (FR), appendix II-H, for additional information. Definitions for standard terminology of the earned value technique follow:

(a) Budgeted Cost for Work Scheduled (BCWS) -- (Planned Cost this Period). This is the budgeted cost of all work scheduled in the measurement period.

(b) Actual Cost of Work Performed (ACWP) -- (Actual Cost this Period).

(c) Budgeted Cost for Work Performed (BCWP). This is the value of work actually completed by the end of the measurement period.

(4) Expenditure Reports and Vouchers. The measurement and reporting of actual costs for reimbursement on a cost contract requires additional information. Payment request vouchers must contain detailed information since obligations are recorded at the project funded line item level and are subject to audit review. Also, if WADs are used by the Corps of Engineers, both the contractor and the Government must be able to relate WAD amounts to individual project funded line items. If WADs are used, payment items must be equated to individual WAD numbers and displayed on the ENG Form 93, Payment Estimate, and Standard Form 1035, Public Voucher for Material Purchases and Services Other than Personal (if required). Sample expenditure reports and vouchers are shown in appendix E.

e. Variance Analysis. Standard contractor reports typically only identify that a variance exists. Subsequent analysis of the variance is left to the Government personnel responsible for cost control and further investigation by the contractor. Where cost and comparison reports will provide an indication of meeting the primary objective of completing within budget, they will not indicate how efficient the contractor is in its performance. The goal of efficiency analysis is to go beyond whether or not the contractor is meeting the prime objective of within budget, and try to determine if the contractor is constructing the facility at the least possible cost. Variance analysis is performed when significant variances are identified and achieved through

detailed analysis of labor, equipment, materials, field overhead, and home office costs as compared against original estimated costs for a standard item of work. Variance analysis is discussed in appendix C and appendix D.

f. Corrective Action. It should be understood that any direction to the contractor involving negotiated and contract documented construction management procedures and techniques require formal changes to the contract by the CO or ACO. In a cost reimbursement contract, how a contractor performs business functions is often defined in some detail in the contract. Otherwise, communications and directions to the contractor involving clarifications or other directions to the contractor must be communicated by the authorized representative of the contracting officer (COR). For example, changes in the manner of reporting or in the application of costs to various elements may necessitate a change to an advance agreement which is formalized in a contract modification. Corrective action may also involve more dramatic changes such as deletion or down scoping of major portions of the contract work. Such actions must be thoroughly coordinated with the CO and the customer prior to formal contract modification. Instances may arise where the integrity of the original or performance measurement baseline is questioned. This may necessitate a revision and/or renegotiation of their makeup. Such an effort should be thoroughly coordinated by the engineer/manager to include attendance by key personnel involved in the original negotiations.

g. Integration, Controls, and Automation. Contract management of all cost reimbursement contracts and cost reimbursement delivery orders managed in the construction phase shall be performed using the Omaha District Contract Management System (CMS). For information on the use of CMS see the Contract Management System Users Manual. Contact Construction Division, Contract Administration Branch (CEMRO-CD-C), for user identification and technical support.

h. Consents and Approvals. Significant procurement actions performed by the prime contractor normally require prior consent by the COR. The contract documents, typically an advance agreement, will define procedures and consent thresholds under procedures for procurement management. Responsibility and authority for consent is determined by the CO on individual contract basis. In any event, subcontract documents must be maintained at the field office complete with plans and specifications. Subcontract modifications may also require consent. They should be filed with the subcontract documents at the field office. All subcontract packages should be forwarded to the official contract file in the District office concurrently

with prime contract documents at financial completion. Detailed consent procedures are discussed in appendix F.

i. Technical Direction, Contract Modifications, and Claims. Cost reimbursement construction contracts include contract clauses for changes and disputes. Because the statement of work contained in most cost reimbursement contracts sets forth only a broad, or not completely defined, description of the contract design, the Government usually seeks to retain the ability to supply contractors with details of performance as work progresses. This is accomplished through use of the work oversight clause allowing direction to the contractor. Technical direction is typically performed through the use of requests for proposals and individual letter WADs (see appendix C), or alternate processes such as FECRs and subsequent approval letters. Either are acceptable; however, they should not be used to replace material changes in the work that fall within the realm of the changes clause or to override the limitation of cost or funds clause. Special procedures may be necessary at the field office near the end of contract work when contractor unobligated and unexpended funds balances are relatively small. It is recommended that a separate WAD for technical changes be established during the last 25 percent of the contract work. The following requirements hold for contract changes, disputes, and technical direction:

(1) Contract Modifications. Contract modifications issued on Standard Form (SF) 30, Amendment of Solicitation or Modification, are required when:

(a) Material changes. The change causes an increase or decrease in the estimated cost or performance time, or if the terms of the contract or advance agreements are changed.

(b) Estimated cost changes. A change to the contract estimated cost for the specific appropriation is required whenever overruns cause the estimated cost of any project funded line item to increase, or when new contract line items are added.

(c) Drawing change. Modifications are not required to issue new sets of design drawings reflecting further advances in the stage of design (i.e., 60% design, 90% design, etc.). However, whenever a revised set of formal drawings maintained at the field level incorporating current design, technical direction changes, and as-built conditions is prepared for distribution to the contractor and plan holders, a contract modification shall be executed. The modification shall identify the reissued drawings.

(2) Claims. The prime contract outlines procedures for claims under the disputes clause. This contract clause is not required to flow down to subcontractors. The advance agreement relating to procurement procedures must identify what FAR clauses will flow down to subcontractors. In the negotiation stage, an advance agreement must address subcontract claims procedures by the prime contractor to include the extent of effort and responsibility for claim analysis and litigation effort by the prime contractor. The advance agreement must state the prime contractor is not to incur any legal expense without prior contracting officer approval since this is not in the baseline budget. CEMRO-CD-C shall be notified on a timely basis when a prime or subcontract claim becomes known. Once the claim letter is received, the field office shall forward a copy of the claim and the subcontract complete with modifications, plans, and specifications to CEMRO-CD-C.

(3) Technical Direction. Specific procedures for technical direction to the prime contractor will be determined by the field office. However, if WAD procedures are used, technical direction to the contractor shall be tied to a request for proposal (RFP) (see figure C-8). Consideration shall be given to customer involvement in change request review; however, customer approval of mandatory changes is neither required nor encouraged. See appendix G.

j. Final Audit and Fiscal Closeout. All cost reimbursement contracts are subject to final audit by the cognizant audit office before the contract can be final paid and the project CWE fiscally closed out. Final audit requests shall be coordinated by the field with District personnel in CEMRO-CD-C. Final payment vouchers and subsequent fiscal closeout of project funded line-items will be completed by CEMRO-CD-C.

FOR THE COMMANDER:

JOHN H. WHISLER, JR.
LTC, EN
Deputy Commander

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Construction
COST REIMBURSEMENT CONTRACT MANAGEMENT

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APPENDIX A

Glossary

1. Cost accounting. A subfield of accounting that records, measures, and reports information about costs.

2. Financial accounting. Providing historical cost related information that is intended primarily for management and external interested parties.

3. Financial management. Traditionally known as one of three interrelated areas of finance. The term financial management, or business finance, involves the actual money management of an overall organization.

4. Integrated cost accounting system. A working system that is an integral part of the firm's comprehensive record-keeping and can provide quantities and cost information without the need for physical count or additional input.

5. Managerial accounting. Providing recent and future oriented (current) cost related information that managers find useful for internal decision making.

6. Project. A defined product, process, or service related to, or constrained by, a schedule which incorporates time and budget parameters. The absence of any one of the three components means a "project" does not exist.

7. Project Management. Understanding, planning, organizing, directing and controlling actions to meet the project objectives of time, schedule, and budget.

8. Line item. A separate and distinct funding category one level below an overall project appropriation.

9. Work allocation document (WAD) -- also called work authorization document. A system for joint government and contractor management control of costs under a cost reimbursement contract. Under this system, all funding authority for costs under the contract is allocated to the contractor by the government on separately defined categories (WADs) for given tasks -- usually aligned within unique project line items. The purpose of the WAD system is to break the total funds obligated under the contract into manageable budget segments or units.

APPENDIX B

Contractor Office Visit Checklist

1. What type of cost accounting system does the contractor use?

   a. Actual cost accounting

   b. Standard cost accounting

   c. Cost accounting standards

2. What type of project scheduling system does the contractor use?

   a. Primivera

   b. Project 2

   c. Other

3. To what extent are the scheduling and cost accounting systems integrated?

4. To what extent is the contractor's cost accounting system able to incorporate and relate:

   a. WAD category costs

   b. Project line-item category costs

   c. Schedule work-item category costs

5. Does the contractor utilize a job order cost accounting system?

6. Is the contractor's accounting system capable of:

   a. Commitment accounting (recording and tracking purchase requisitions)

   b. Obligation accounting (recording and tracking purchase orders)

7. Is the contractor's cost accounting and schedule system capability of identifying variances from a baseline estimate?

8. Is the contractor's cost accounting system capable of

accounting for efficiency variances?

9. Is the contractor's cost accounting and schedule system capable of incorporating a revised baseline estimate?

10. Is the contractor's system able to differentiate between scope cost overrun variances?

11. Does the contractor's accounting system for indirect costs group costs in homogeneous pools? Is there a relationship between indirect costs and cost objectives? Are rates supported without reliance on estimates? Is there an equitable and consistent allocation of costs to all segments? Are there supporting schedules and other data to substantiate cost allocations and data to support indirect rates?

12. Is the contractor's system capable of projecting the estimated cost at completion on a real time basis.

APPENDIX C

Work Allocation Document (WAD) Procedures

1. Introduction. This appendix addresses standard procedures for use of WADs. Also included is a sample standard operating procedure defining field WAD procedures.

2. List of Figures. The following figures are included in this appendix:

a. Figure C-1, WAD standard operating procedure for field office.

b. Figure C-2, WAD breakdown structure and original budget amount.

c. Figure C-3, Work item breakdown structure (subWADs).

d. Figure C-4, WAD letter format.

e. Figure C-5, WAD allocation schedule.

f. Figure C-6, WAD advance agreement.

g. Figure C-7, Contract pricing and award schedule .

h. Figure C-8, Military Construction Project Data, DD Form 1391.

i. Figure C-9, Detailed cost analysis spreadsheet.

j. Figure C-10, WAD summary directive.

k. Figure C-11, Line item split of non constuction WADs.

l. Figure C-12, WAD letter.

m. Figure C-13, Request for proposal/technical direction cover letter.

n. Figure C-14, Request for proposal (RFP).

o. Figure C-15, Allocation summary report.

p. Figure C-16, After action report.

q. Figure C-17, Quick closeout procedure agreement.

3. Sample Project Background. The above figures are derived from a construction cost reimbursement contract which utilized WAD procedures as described herein. There were seven (7) basic WADs in this contract (figures C-2 thru C-7).

a. Direct Costed Work. The project consisted of three sites; direct construction costs for these sites were separately designated as WADs 1, 2, and 3. These first three (3) WADs were all funded from the same project line item. The contract also included another project fund line item for furniture and equipment at each site. WAD 4 was established to separate this supply type work from site construction work.

b. Field Overhead. Project management office costs, WAD 5, were established to keep direct field office costs separate from home office expense. This WAD, however, is funded from both project line items. Therefore, to facilitate costing procedures and minimize contractor detailed accounting effort, a predetermined line item split was established to allow for field office allocation of these costs to the line items. The line item split was based on a weighted average of WADs 1 through 3 against WAD 4.

c. Home Office Overhead. General and administrative expense, was established as WAD 6. It was also funded from two separate project line items and subject to the same line item split described above.

d. Fee. A final WAD 7 was established for the designated fixed fee. It was also subject to the predetermined line item split as fee was earned and costed.

e. Work Breakdown Structure. The above basic WADs were further broken down into "subWADs" (also described as work items, tasks, etc.). Cost and schedule control was performed at this level. See figure C-10 for a listing of the breakdown. Identification of subWADs was primarily generated from the work breakdown structure on the DD Form 1391 (figure C-8). Even though the monies for the subWADs were from the same project funded line item, it was anticipated that the customer may require reporting of actual costs for each work item on the final DD Form 1391, turnover document. Therefore, as established, WADs and subWADs were used to facilitate allocation of costs at whatever work breakdown was desired.

4. Procedures.

a. Preaward. The negotiation team shall designate WADs and

subWADs and negotiate the budget amount prior to award. A detailed spreadsheet (figure C-9) reflecting the original Government estimate, the contractors proposal, and the negotiated amount shall be prepared and matched with the WAD work breakdown structure. WADs shall be included in an advance agreement incorporated into the contract. The negotiation team shall provide breakdowns of WADs and line item splits to CEMRO-CD for development of preaward current working estimates (CWE) and initializing the WAD structure into the Contract Management System (CMS). Payment schedules established in the contract shall be established to provide reimbursable payments by WAD number.

b. Preconstruction.

(1) WADs. Additions, deletions, or changes to WAD designations shall be made by contract modification. Changes to WAD budgeted amounts after award that increase the overall contract estimated cost for any line item first require the execution of a contract modification adjusting the estimated cost and project line item obligation amount.

(2) SubWADs. Additions, deletions, or changes to subWAD work item designations may be changed without a contract modification by issuing a revised WAD (see figure C-7). However, adjustments to subWAD budgeted amounts that have the net affect of increasing the contract obligation for any project funded line-item also require a contract modification adjusting the estimated cost and project line item obligation, prior to subWAD budget adjustments issued to the contractor.

(3) Payment Estimates. Payment estimates shall be initialized on CMS. Payment items by WAD number shall be recorded.

(4) Subcontract Costs. Review of subcontract and purchase order amounts shall be compared to the spreadsheet original budget estimated cost breakdown (see figure C-5) to determine whether bids are within or over budget. Budgets shall be adjusted, and contract modifications issued as appropriate, when increases are noted.

c. Construction.

(1) Schedule. Schedule analysis shall be integrated with cost control work breakdown structure to the extent it facilitates scheduling and construction of the work. However, reporting schedule progress by project funded line item is not

required.

(2) Reports. Cost and comparison reporting incorporating the WAD work breakdown structure is mandatory. Contractor cost and comparison reports shall incorporate the parameters defined in DM 415-1-6, page 9, paragraph 8.d.(2), Cost and Comparison, and indicate favorable and unfavorable variances from the performance measurement baseline. Charts and graphs for briefings and reporting to higher management and customers shall be consistent with project management plans.

(3) Variance Analysis. Any significant variance in subWAD work items identified in the cost and comparison report, or in proposed acquisitions, shall be further analyzed. The following is offered as a guideline of standard variance analysis categories. However, field offices are encouraged to utilize contractor methods for analyzing variances to the maximum extent possible. If the contractor utilizes standard cost accounting or other related procedures, many of the above variances will be captured in the course of accounting. Otherwise, the means of capturing variance data, defining variance and reporting shall be predetermined with the contractor prior to award. Standard terminology is as follows:

(a) Labor Variance. An estimation of total labor cost over or under budget may be determined by actual labor hours minus spreadsheet quantity estimated labor hours times percent of physical progress. Detailed breakdown of labor variance may be analyzed by:

(aa) Efficiency Variance. Actual labor hours minus spreadsheet standard estimated labor hours times spreadsheet estimated rate per hour.

(bb) Rate Variance. Actual rate per hour minus spreadsheet estimated rate per hour times actual number of hours.

(b) Material Variance. The total variance for material is the actual cost minus the total spreadsheet estimated cost for the material within a work item. Total material variance is composed of the following:

(aa) Quantity Variance. Actual quantity utilized for a work item minus spreadsheet estimated quantity times spreadsheet estimated price.

(bb) Price variance. Actual price for materi-

als in a work item minus estimated price for materials in the work item times actual quantity utilized.

(c) Equipment Variance. Total variance for equipment is the actual cost minus the spreadsheet estimated cost for a work item. Total equipment variance has the following components:

(aa) Quantity Variance. Actual quantity utilized for a work item minus spreadsheet estimated quantity times spreadsheet estimated price.

(bb) Price Variance. Actual price for equipment in an item of work minus estimated price for equipment in the work item times the actual quantity utilized.

(d) Overhead Variance. Both direct charged variable overhead and indirect charged fixed overhead should be analyzed in detail if significant variances are identified on the cost and comparison report or by other means. These variances are generally identified and categorized as follows:

(aa) Variable Overhead Variance (Field Overhead Variance). Breakdown of variable overhead should be made between spending variance and efficiency variance. Spending variance is normally comprised of price changes exclusively. Efficiency variance in variable overhead relates to the efficient use of direct labor hours similar to direct labor variance.

(bb) Fixed Overhead Variance (Home Office Expense Variance). To properly analyze fixed overhead variances, the method used to develop the fixed overhead rate must be known, as well as how it is applied to construction costs. Variances in fixed overhead are attributable to either spending variance or volume variance:

(aaa) Spending Variance. This is the difference between the original spreadsheet budgeted fixed overhead (home office general and administrative expense) and the actual fixed overhead incurred by the contractor.

(bbb) Volume Variance. The fixed overhead volume variance is the difference between the original budgeted fixed overhead and the overhead actually applied to the job.

(4) Audits. The field office must analyze costs, or request audit assistance, to the extent necessary to assure

spending variances are absorbed by the contractor. Volume variances are generally reimbursable. However, prior understandings and controls should be established to preempt direct charging of home office personnel (mixing variable overhead with traditional fixed overhead expense) that are normally incorporated in home office expense pools. If some alternate charging is allowed, the arrangement shall be detailed in an advance agreement with a maximum charge amount. The current general and administrative overhead rate must be incorporated into the contract by modification when it varies from the advance agreement overhead rate. Also required is a certificate of indirect costs. It is permissible and encouraged to negotiate a maximum overhead rate allowable under the contract.

(5) Changes and Technical Direction. Design changes, user requested changes, differing site conditions, etc., shall be incorporated utilizing the request for proposal process (shown in figure C-8) or similar process such as a facility engineer change request (FECR) process as shown in appendix G. Proposals increasing WAD budget amounts shall be incorporated into the WAD estimates and identified to the appropriate project funded line item.

(6) Omissions and Duplications. Efforts shall be made to identify omissions and duplications as soon as possible and WAD budgeted amounts adjusted accordingly.

(7) Budget. The budget shall be reviewed and reported at least monthly. Contract modifications shall be issued prior to the next month to reflect increases in revised estimated costs. The contractor shall be required to submit routine cost and comparison and variance analysis reports at least monthly. Field offices shall negotiate changes to previous WAD budgeted amounts (figure C-10) and determine project funded line item splits when necessary (figure C-11). WAD budget changes shall be entered into CMS and contract modifications requested using CMS. WAD summary directives shall be generated utilizing CMS (figure C-10).

(8) WAD letters. The scope of WADs are revised as necessary to update all RFPs or modifications issued since the previous WAD letter was issued (figure C-12). Also note that the WAD scope lists each applicable contract drawing number. This is required to ensure costs are charged against the correct WAD and project funded line item. The Contracting Officer's Representative (COR), or the designated alternate, signs WAD letters and WAD summary directives issued to the contractor. Signature by the contractor is requested. The original WAD letter shall be

returned to the COR after contractor signature. Executed WAD letters shall be forwarded to CEMRO-CD-C under green cover sheet (MRO Form 819) for incorporation into the original contract file.

(9) WAD Allocations. Field offices shall utilize CMS for establishing and updating contractor WAD allocations of WAD budgeted amounts. Local WAD allocation summary reports (figure C-15) may be utilized as necessary.

(10) Payment Estimates. Contractor earnings shall be recorded in CMS by WAD number and project funded line item. ENG Form 93, Contractor Payment Requests, shall be generated utilizing CMS. Eng Form 4480, Accounting Entry/Reference Document, shall be completed using CMS output data.

d. Postconstruction.

(1) Final Audit. A request for final audit of contractor costs must be submitted to the cognizant audit office after completion of the physical work and completion of interim reimburesement payments. The final audit may be requested by the field; however, prior coordination with CEMRO-CD-C is required. When applicable, quick closeout audit procedures should be utilized (figure C-17).

(2) After Action Report. After physical completion of the work, an after action report is required by ER 15-1-21, paragraph 6.d(2). Figure C-16 provides a sample of the narrative.

Standard Operating Procedure (SOP)

Designated Seismic Sites (DSS)
Contract No. DACA45-91-C-0027

NUMBER 4

SUBJECT: Preparation, Processing, and Control of Work Allocation Directives (WADs)

1. Purpose. To establish uniform procedures for preparation, processing, and contol of all WADs required under the designated seismic sites (DSS) construction contract.

2. Applicability. This procedure is applicable to all personnel assigned or supporting the DSS construction projects.

3. References. Advance Agreement #21 and Contract Documents.

4. Procedures.

a. The WAD system is defined and described fully in the special clause "Cost Control (Obligation Management) Procedures." Advance Agreement #21, "Work Allocation Directives," lists seven basic series of WAD's for the contract and the budget amount agreed upon for each during contract negotiations (reference enclosure 4-1 and Section B of the contract). These amounts cannot be increased or decreased except by contract modification (See SOP 3 on contract modifications).

b. Each of the seven basic WADs, Section B of the contract, is further broken down into subWAD's (reference enclosure 4-2). The budget amount for each subWAD was agreed upon during contract negotiations. These amounts may be increased or decreased without modifying the contract, by issuing new WAD's, as long as the total budget amount for the WAD series referenced in paragraph a. is unchanged.

c. The current budget amount of each WAD may or may not be affected by the following factors during the life of the contract. Firm fixed price subcontracts and purchase orders, productivity, quantity variations, design updates, omissions and duplications, audit, and changes. Any one or all of the above may be cause for revising the budget amount of a WAD at one time or another (See SOP 5, Processing Changes).

Figure C-1

d. WADs will be issued at the subWAD level (enclosure 4-2). Issuance of WADs will be an area office responsibility with coordination through the CE project engineer. All WAD's will be signed by the authorized representative of the contracting officer, area engineer, and acknowledged by the contractor's project manager. Prior to issuance of a WAD revision, the contractor will submit all required backup data far enough in advance (approximately two weeks) to allow review and preparation of the WAD.

e. A control number will be assigned to each WAD based on the advance agreement and prefixed with "WAD"; i.e., WAD "#DSS-201 or WAD #DSS-404, etc. Advance Agreement #21, Work Allocation Directives," defines the location of the work associated with each WAD series; i.e., 100's number. The 10's and 1's numbers, following the 100's number defines the second level breakdown of the WAD. For instance, reference the attached WAD #DSS-204-1 (enclosure 4-3) as an example. The number "2" identifies the project as the Tulsa Site. The number "04" further identifies the WAD to be associated with "Data Recording Building". The "1" after the "204" means this is the first allocation issued for the WAD. A "2" would mean the second allocation, a "3" the third, etc. The WAD allocations may be issued in time increments, depending on the time phased cost curve developed for each WAD (reference AA #21, para. 4).

f. The budgetary estimate for the WAD, as jointly agreed upon with the contractor, will be attached to and filed with the official contract file copy of the WAD at the area office. The allocation amount for each time increment will be determined prior to issuance based on the WAD cost curve. All WAD negotiations and correspondence will be filed in the applicable WAD file at the area office.

g. The first paragraph of the WAD references the site. The second paragraph states the total amount currently budgeted for the site (Section 3 of the contract plus modifications, if any). The third paragraph states the amount budgeted for the particular sub-Wad, in this case "Data Recording Building." The fourth paragraph states the amount allocated and the time increment, based upon the WAD Allocation Schedule (enclosure 4-4, sheets 1 thru 3). The fifth paragraph lists the applicabled drawings for the particular WAD (Scope). Paragraph six reminds the contractor of the special clause requirement concerning exceeding the allocated amount of the WAD. Subsequent allocation increments are issued as the allocated limit is approached or at the end of

Figure C-1 (Cont'd)

the time period, whichever comes first. If actual WAD allocations indicate an overrun, a meeting between Government and contractor representatives is held to discuss management action alternatives. Actual obligations must be compared against physical progress in order to determine whether or not an overrun exists. It may be that work for the WAD is ahead of schedule, in which case the WAD cost curve would erroneously indicate a cost overrun. Physical progress is included in SOP 14.

h. All WAD's will be distributed as follows:

After signature by authorized COR:

Original plus 1 copy - contractor

Suspense Copy - area office files thru COE project engineer

Suspense Copy - COE site engineer

After acknowledgement by the contractor's project manager, the original is returned to the Black Hills Area Office for distribution as follows:

Original CEMRO-CD-C

Copy - area office files thru COE project engineer

Copy - CE site engineer

Copy - Defense Contract Audit Agency Denver Branch Office

i. The area office will provide all necessary reports for information purposes and to verify the contractor's reports.

Figure C-1 (Cont'd)

Construct Designated Seismic Sites

Advance Agreement No. 21

WAD Structure and Original Budget Amount

SERIES	TITLE	DRAWING CODE	BUDGET ESTIMATE	LINE ITEM
100	Black Hills Site	AF317-90-01	$1,781,100	CG
200	Tulsa Site	AF317-90-01	$722,000	CG
300	Newport Site	AF317-90-01	$813,700	CG
400	O&M Funded Items	NA	$180,500	O&M
500	Mgt. Facility OH WAD Costs	NA	$227,800	CG&OM
	Subtotal		$3,725,100	
600	Home Office G&A (3.89%)	NA	$145,000	CG&OM
	Subtotal		$3,870,100	
700	Fixed Fee	NA	$309,608	CG&OM
	Total estimate		$4,179,708	

Figure C-2

Construct Designated Seismic Sites

Work Item Breakdown Structure (SubWADs)

	BLACK HILLS SITE	
WAD NO.	DESCRIPTION	BUDGET $
101	Sitework, fence, site electric, clearing, storage building, telephone and ped., transformer and pad.	$762,400
102	Interior electric to 5 feet outside building.	$25,500
103	Walkway and handrail.	$23,300
104	Data Recording Bldg.	$74,600
105	Road to Sta. 100+2[illegible]	$250,400
106	Emerg. Generator and Pad	$31,000
107	Precast Concr. Trench	$20,300
108	Borehole	$103,300
109	Vault & Seismic Pier	$47,700
110	Escort Facility	$152,700
111	Winter Protection	$92,600
112	Site Overhead/Mob/Demob	$196,800
	Total Black Hills Site	$1,781,100

Figure C-3

	TULSA SITE	
WAD NO.	DESCRIPTION	BUDGET $
201	Sitework/Fence/Site Elec/ Clearing/Sto. Bldg/Teleph. & Ped/Transformer & Pad	$87,400
202	Interior Elec. to 5 Ft. Outside Bldg.	$25,500
203	Walkway and Handrail	$24,500
204	Data Recording Bldg.	$74,600
205	Not Used	$0
206	Emerg. Generator and Pad	$31,000
207	Precast Concr. Trench	$20,300
208	Borehole	$53,500
209	Vault & Seismic Pier	$45,300
210	Escort Facility	$153,300
211	Winter Protection	$14,500
212	Site Overhead/Mob/Demob	$192,100
	Total Tulsa Site	$722,000

Figure C-3 (Cont'd)

	NEWPORT SITE	$813,700
WAD NO.	DESCRIPTION	BUDGET $
301	Sitework/Fence/Site Elec/ Clear-ing/Sto. Bldg/Teleph. & Ped/Transfor-mer & Pad	$142,800
302	Interior Elec. to 5 Ft. Outside Bldg.	$25,500
303	Walkway and Handrail	$24,300
304	Data Recording Bldg.	$74,300
305	Not Used	$0
306	Emerg. Generator and Pad	$31,000
307	Precast Concr. Trench	$23,800
308	Borehole	$47,800
309	Vault & Seismic Pier	$54,700
310	Escort Facility	$153,700
311	Winter Protection	$66,600
312	Site Overhead/Mob/Demob	$169,200
	Total Newport Site	$813,700

Figure C-3 (Cont'd)

	O&M FUNDED ITEMS	$180,500
WAD NO.	DESCRIPTION	BUDGET $
401	Black Hills DSS Site	$46,300
402	Mallo Camp (Black Hills)	$41,600
403	Tulsa DSS Site	$46,300
404	Newport DSS Site	$46,300
	Total O&M Funded Items	$180,500
501	Management facility overhead costs	$227,800
	Subtotal	$3,725,100
601	Home office G&A	$145,000
	Subtotal	$3,370,100
701	Fixed fee	$309,608
	Total contract budget estimate	$4,179,708

Figure C-3 (Cont'd)

WAD Letter Format

January 30, 1991

SUBJECT: Contract DACA45-91-C-0027, Designated Seismic Sites, Black Hills, South Dakota; Newport, Washington; and Tulsa, Oklahoma; Advance Agreement No. 21.

Hensel Phelps Construction Co.
Attn: Dan Keeley
420 Sixth Avenue
Greeley, Colorado 80632-0710

Serial Letter
No. 91-0027---
WAD No. DSS-204-1

Gentlemen:

Reference: Tulsa Site - Data Recording Building.

The total current budget estimate jointly agreed upon for the Tulsa Site is in the amount of $722,000.

The total current budget estimate jointly agreed upon for WAD 204, Data Recording Building, is in the amount of $74,500.

You are currently allocated funds and authorized to incur costs not to exceed $_____ for the period January 30, 1991 through _____1991 for WAD 204.

The total scope of work included in WAD 204 is described on the following contract drawings or portions thereof: Drawing Code AF 317-90-01, Sheets 1 through 4, C-1, C-3, A-2, A-3, A-4, S-3, M-2, & E-3, dated January 1991, and associated specifications, for the Tulsa Site, as revised by _____ _____.

Your costs for this WAD shall not exceed the amount currently allocated without prior approval of the authorized representative of the contracting officer.

Sincerely,

Mark Mailander
Authorized Representative
of the Contracting Officer

Figure C-4

Serial Letter
No. 91-0027
Wad No. DSS-204-1

Receipt Acknowledged:

_____
Date

_____
Dan Keeley, Project Manager

CF:
CE Proj. Engr., Site Engr.

Figure C-4 (Cont'd)

Contract No. DACA45-91-C-0027
Construct Designated Seismic Sites
WAD Allocation Schedule
(Total Contract)

WAD NO.	DESCRIPTION	NEGO-TIATED AMT	CURRENT BUDGET	FEB PLAN (ACT)	MAR PLAN (ACT)	APR PLAN (ACT)	MAY PLAN (ACT)	JUN PLAN (ACT
101	Sitework, fence, site electric, clearing, storage building, telephone and pad, transformer and pad.	762,400	762,400	375,000	96,500	100,000	100,000	90,900
102	Interior electric to 5 feet outside building.	25,500	25,500		25,500	0		0
103	Walkway and handrail.	23,300	23,300	0	12,000	5,000	5,000	1,300
104	Data recording building.	74,500	74,500	0	63,000	5,000	5,000	1,600
105	Road to Sta. 100+21.	250,400	250,400	0	247,000	0	1,700	1,700
106	Emerg generator & pad.	31,000	31,000	0	31,000	0	0	
107	Precast concrete trench.	20,300	20,300	0	7,000	6,000	6,000	1,300
108	Borehole.	103,300	103,800	0	103,800	0	0	0
109	Vault & seismic pier.	47,700	47,700	0	20,000	12,000	3,700	
110	Escort facility.	152,700	152,700	0	145,000	3,000	3,000	1,700
111	Winter protection.	92,600	92,600	0	40,000	30,000	11,300	11,300
112	Site overhead, mobilization & demob.	158,300	196,300	0	50,000	60,000	50,000	26,300
	Subtotals	1742000	1780500	375,000	840,800	221,000	185,700	136100

Figure C-5

Advance Agreement No. 21
Work Allocation Documents

1. In accordance with Special Clause "Cost Control (Obligation Management) Procedures," the WAD breakdown shall be as follows:

WAD No.	Description	Estimated Amount
1	Black Hills Site	$1,781,800
2	Tulsa Site	$722,000
3	Newport Site	$813,700
4	O&M Funded Items	$180,500
5	Management Facility OH Cost	$227,800
6	Home Office G&A	$145,000
7	Fixed Fee	$309,608
	TOTAL	$4,179,708

2. The contractor will develop a time-phased cost curve for each WAD listed above. This curve will be the basis for the protion of the WAD estimate "allocated" to the contractor for each increment of time. The curves will be updated for each monthly report to include actual costs.

3. In addition to the above breakdown, WADS 1, 2, 3, and 4 will be further broken down into work elements and detailed line items, and all costs (mob/demob, labor, material, equipment, subcontractors, field office overhead, etc.) accurately accounted for on a real-time basis.

4. WADs 1, 2, 3 and 4 shall have individual schedules to track physical completion status concurrent with incurred costs. A report of percent of incurred cost versus percent physical completion shall be developed and updated at each monthly meeting.

5. Obligation or expenditures of funds for any work not included in a WAD issued by the Contracting Officer is unauthorized. The estimated amount in paragraph 1 shall be revised by contract modification only.

Figure C-6

SCHEDULE
Section B

SUPPLIES OR SERVICES AND PRICES/COSTS

Description	Estimated Amount
Black Hills Site	$1,781,100
Tulsa Site	$722,000
Newport Site	$813,700
O&M Funded Items	$180,500
Mgt Facility OH WAD Costs	$227,800
Home Office G&A	$145,000
Fixed Fee	$309,608
Total	$4,179,708

AWARD SCHEDULE

ITEM	DESCRIPTION	QTY	U/M	U/P	AMOUNT
0001	Construction: Construct Designated Seismic Sites (DSS) Projects Located at Black Hills, SD; Tulsa, OK; and Newport, WA	1	JB	$4,179,708	$4,179,708

END OF SECTION B

23. Accounting and Appropriation Data:

RK1151190182004 2112050 108-8061 P70000000 S25066 - On-site Inspection Agency FY91-MCDA $3,963,988.00

RK1153190282004 2112050 108-8061 P70000000 S25066 - On-site Inspection Agency FY91 O&MDA $215,720.00

for a total of $4,179,708.00

Figure C-7

FOR OFFICIAL USE ONLY *(WHEN DATA IS ENTERED)*

1. COMPONENT	FY 19__ MILITARY CONSTRUCTION PROJECT DATA	2. DATE
ARMY		

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
Black Hills, South Dakota	Designated Seismic Site Black Hills, SD

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
			1,880.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Designated Seismic Site	LS			1,618.6
Sitework				(344.4)
Electrical				(345.4)
Walkway				(26.4)
Data Recording Building				(167.3)
Foundation				(142.9)
Emergency Generator Pad				(2.1)
Precast Concrete Trench				(31.1)
Borehold				(226.6)
Vault & Seismic Pier				(331.9)
Subtotal				1,618.6
Contingency (10%)				161.3
Total Contract Cost				1,780.5
Supervision, Inspection & Overhead (5.4%)				97.3
Total Request				1,878.4
Total Request Rounded				1,880.0

SAMPLE

10. DESCRIPTION OF PROPOSED CONSTRUCTION

Provide a facility for the installation and operation of seismic equipment of the Soviet side at the designated seismic site located at Black Hills, South Dakota, U.S.A. in accordance with the protocol to the treaty between the United States of America and the Union of Soviet Socialist Republics on the limitation of underground nuclear weapon tests.

Equipment:
This project will provide the following: a) A vault facility with seismic block; 2) A borehole facility; c) Covered cableway and walkway facility; (d) A data recording and work facility; e) Standard commercial power; f) A materials storage facility; g) Backup electrical generator; h) Area fencing and lighting; (i) All-weather access road to and within the facility; j) Removable work shelter at borehole head; k) Telephone service.

Start of construction is dependent upon treaty ratification, expected early in December, 1990. Construction is to be complete within 170 days after the treaty is in force. The site is remote.

Requirement: The facility is necessary because of the protocol of the treaty between the United States of America and the Union of Soviet Socialist Republics on the limitation of underground nuclear weapon tests which calls for such seismic monitoring facilities.

DD FORM 1 DEC 76 1391 PREVIOUS EDITIONS MAY BE USED INTERNALLY UNTIL EXHAUSTED PAGE NO.

FOR OFFICIAL USE ONLY *(WHEN DATA IS ENTERED)*

Figure C-8

Detailed Cost Analysis Spreadsheet
Subcontractor's Proposal for Firm Fixed Price Subcontract

Item	Description	Quant	Unit	Price	Amount
1.	Material				
1.1	Raw Material	1	L.S.	10,659.00	10,659.00
2.	Material Overhead	11.24	*		1,198.07
3.	Labor				
3.1	Direct Mnftg	571	hours	6.35	3,625.85
3.2	Quality Control	2000	hours	6.35	12,700.00
3.3	Clean Room Reqm't	1500	hours	6.35	9,525.00
3.4-3.9	Other Dir Labor	4111	hours	6.35	26,104.85
3.	Subtotal labor	8182	hours		51,955.70
4.	Manuf Overhead	571	hours	6.10	3,483.10
5.	Other Costs	1	L.S.	20,953.00	20,953.00
	Subtotal				88,248.87
6.	Gen & Admin	571	hours	17.04	9,729.84
	Subtotal				97,978.71
7.	Profit	12	%		11,757.72
	Total Fixed Price				109736.43

Figure C-9

Detailed Cost Analysis Spreadsheet
Prime Contractor's Estimate for Firm Fixed Price Subcontract

Item	Description	Quant	Unit	Price	Amount
1.	Material				
1.1	Raw Material	1	L.S.	10,459.00	10,459.00
2.	Material Overhead	11.24	%		1,175.59
3.	Labor				
3.1	Direct Mnftg	571	hours	6.35	3,625.85
3.2	Quality Control	1889	hours	6.35	12,001.50
3.3	Clean Room Reqm't	1500	hours	6.35	9,525.00
3.4-3.9	Other Dir Labor	4111	hours	6.35	26,104.85
3.	Subtotal labor	8072	hours		51,257.20
4.	Manuf Overhead	571	hours	5.65	3,226.15
5.	Other Costs	1	L.S.	17,552.00	17,552.00
	Subtotal				83,669.94
6.	Gen & Admin	571	hours	17.04	9,729.84
	Subtotal				93,399.78
7.	Profit	12	%		11,208.25
	Total Fixed Price				104608.03

Figure C-9 (Cont'd)

Detailed Cost Analysis Spreadsheet
Negotiated Settled Price for Firm Fixed Price Subcontract

Item	Description	Quant	Unit	Price	Amount
1.	Material				
1.1	Raw Material	1	L.S.	10,459.00	10,459.00
2.	Material Overhead	11.24	%		1,175.59
3.	Labor				
3.1	Direct Mnftg	571	hours	6.35	3,625.85
3.2	Quality Control	1890	hours	6.35	12,001.50
3.3	Clean Room Reqm't	1500	hours	6.35	9,525.00
3.4-3.9	Other Dir Labor	4111	hours	6.35	26,104.85
3.	Subtotal labor	8072	hours		51,257.20
4.	Manuf Overhead	571	hours	5.65	3,226.15
5.	Other Costs	1	L.S.	17,552.00	17,552.00
	Subtotal				83,669.94
6.	Gen & Admin	571	hours	17.04	9,729.84
	Subtotal				93,399.78
7.	Profit	12	%		11,208.25
	Total Fixed Price				104608.03

Figure C-9 (Cont'd)

Detailed Cost Analysis Spreadsheet
Notes on Prime Contractor's Analysis and Negotiated Price

Item 1: Significant omission of detailed cost and/or pricing data concerning material. Further, there is an absence of discussion in the price negotiation memorandum concerning negotiation of prices involving material - with the exception of disallowance for a tool of $190.00.

Item 2: Material overhead rate appears correct.

Item 3: There is a significant omission of detailed cost data regarding seven direct labor items. It appears the prime contractor agreed with the price, but there is no detailed costs on which to base that assumption. Further, there is no discussion of this agreement in detail in the price negotiation memorandum.

Item 4: Manufacturing overhead rate as negotiated is supported by DCAA audit and appears correct. However, the prime contractor made an error when summarizing the agreed price for this item. The agreed price is actually $3,226 - not $3,262 as shown on the summary tabulation.

Item 5: Other costs involving about $20,000 are provided only in a lump sum figure. This is too great of a value to be treated as lump sum without detailed discussion of cost data. No mention of difference between the prime contractor's estimate and the sub's proposal is given.

Item 6: General and Administration (G&A) appears within reasonable realm; however, it is not supported by a Government audit.

Item 7: Profit was negotiated at 12%. The negotiated profit is not supported by a weighted guidelines analysis.

Figure C-9 (Cont'd)

WAD Summary Directive

June 13, 1991

SUBJECT: WAD Allocations for Contract No. DACA45-91-C-0027, Designated Seismic Sites

Hensel Phelps Construction Co.
420 Sixth Avenue
Greeley, Colorado 80632-0710

Serial Letter
No. 91-0028---

Gentlemen:

Forwarded for your action are the WAD allocations associated with Directive No. 10, dated July 13, 1991.

The overall estimated contract amount is $4,179,708. 00. WAD allocations in the amount of $[illegible]8.00 are included in the attached breakdown. The total WAD allocations for the contract are $3,739,508.00 The COEMIS line item breakdown is as follows:

	DIRECT RK11511901	O&M RK11531902
Est WAD Amounts Less Fee	$3,312,763.00	$117,137.00
Fixed Fee	299,034.00	10,574.00
TOTAL	$3,611,797.00	$127,711.00

Sincerely,

Mark Mailander
Authorized Representative
of the Contracting Officer

Figure C-10

Total Contract Funds

WAD	Description	Est Cost	Allocation
101	Sitework-BH	608,900.00	521,500.00
102	Interior Elec-BH	52,500.00	52,000.00
103	Walkway & Handrail-BH	23,300.00	23,000.00
104	Data Recording Bldg-BH	71,000.00	56,000.00
105	Road to Sta 100.21.56-BH	250,400.00	240,000.00
106	Emerg Generator & Pad-BH	28,000.00	27,000.00
107	Precast Con. Trench-BH	20,300.00	20,000.00
108	Borehole-BH	102,000.00	100,000.00
109	Vault & Seismic Pier-BH	57,700.00	55,000.00
110	Escort Facility-BH	91,000.00	78,000.00
111	Winter Protection-BH	92,500.00	40,000.00
112	Site OVH/MOB/DEMOB-BH	206,000.00	190,000.00
201	Sitework-Tul	150,200.00	150,000.00
202	Interior Elec-Tul	50,500.00	50,000.00
203	Walkway & Handrail-Tul	24,600.00	24,000.00
204	Data Recording Bldg-Tul	71,000.00	50,000.00
206	Emerg Generator & Pad-Tul	27,500.00	27,000.00
207	Precast Concrete Trench	20,300.00	20,000.00
208	Borehole-Tul	76,500.00	78,000.00
209	Vault & Seismic Pier-Tul	55,300.00	55,000.00
210	Escort Facility-Tul	90,500.00	72,000.00
211	Winter Protection-Tul	14,500.00	0.00
212	Site OVM/MOB/DEMOB-Tul	181,600.00	180,000.00
301	Sitework-HEW	260,000.00	260,000.00
302	Interior Elec-HEW	54,400.00	54,000.00
303	Walkway & Handrail-HEW	24,300.00	24,000.00
304	Data Recording Bldg-HEW	77,000.00	58,000.00
306	Emerg Generator & Pad-HEW	28,400.00	28,000.00
307	Precast Concrete Trench	23,800.00	23,000.00
308	Borehole-HEW	75,000.00	75,000.00
309	Vault & Seismic Pier-HEW	64,700.00	64,000.00
310	Escort Facility-New	100,200.00	83,000.00
311	Winter Protection-HEW	68,600.00	20,000.00
312	Site OVM/MOB/DEMOB-HEW	176,200.00	176,000.00
401	Black Hills DSS Site	46,300.00	25,000.00
402	Mallo Camp (Black Hills)	41,600.00	30,000.00
403	Tulsa DSS Site	46,300.00	25,000.00
404	Newport DSS Site	46,300.00	25,000.00
501	Mgmt Fac. OVH WAD Costs	227,300.00	227,000.00
601	Home Office G&A	145,000.00	128,400.00
701	Fixed Fee	309,608.00	309,608.00
	TOTALS	4,179,708.00	3,739,508.00

Figure C-10 (Cont'd)

Line Item Split of Non Construction WADs

WAD Ratios and Line Item Pecentage Split

1. Weight determination based on ratio of constuction work WADs (WADs 101 through 104):

WAD No.	Line Item	Title	Allocation	Percent
101-312	11901	Construc-tion Gener-al	2,969,500	96.5848
401-404	31902	Operation and Maint-enance	105,000	3.4152
		Total	3,074,500	100

2. Line item percentage split applied to WAD 501, Management Facility Overhead:

WAD No.	Line Item	Title	Allocation
501	11901	Construc-tion Gener-al	219,248
	31902	Operation and Mainte-nance	7,752
		Total	227,000

Figure C-11

WAD Letter

June 13, 1991

SUBJECT: Contact DACA45-91-C-0027, Designated Seismic Sites, Black Hills, South Dakota; Newport, Washington; and Tulsa, Oklahoma; Advance Agreement No. 21

Hensel Phelps Construction Company
420 Sixth Avenue
Greeley, Colorado 80632-0710

Serial Letter
No. 91-0027-70
WAD No. DSS-108-1

Gentlemen:

The total current budget estimate jointly agreed upon for the Black Hills Site is in the amount of $1,759.00. This is a budget decrease of $22,100 based on electrical, modular building, and borehole bid results.

The total current budget estimate jointly agreed upon for WAD 108, Borehole, is in the amount of $102,000. This is a budget decrease of $1,800 based on borehold bid results.

You are currently allocated funds and authorized to incur costs not to exceed $96,000 for the period January 30, 1991 through April 30, 1991 for WAD 108.

The total scope of work included in WAD 108 is described on the following contract drawings or portions thereof: Drawing Code AF 317-90-01, Sheets 1 through 4, C-1, C-2, A-2, S-3, and S-4 dated January 1991, and associated specifications, for the Black Hills site as revised by RFP Nos. 002, 005, 010, and 013.

Your costs for this WAD shall not exceed the amount currently allocated without prior approval of the authorized representative of the contracting officer.

Sincerely,

Lawrence C. Jackson
Authorized Representative
of the Contracting Officer

Figure C-12

Serial Letter
No. 91-0027-70
WAD No. DSS-108-1

Receipt Acknowledged:

_____
Date

_____
Dan Keeley, Project Manager

Figure C-12 (Cont'd)

Request for Proposal/Technical Direction Cover Letter

June 13, 1991

SUBJECT: Contract DACA45-91-C-0027, Designated Seismic Sites, Black Hills, South Dakota; Newport, Washington; and Tulsa, Oklahoma; Request for Proposal No. 039

Hensel Phelps Construction Company
420 Sixth Avenue
Greeley, Colorado 80632-0710

Serial Letter
No. 91-0027-258
WAD No. DSS-108-1

Gentlemen:

The attached Request for Proposal No. 039 identifies a description of changes to the drawings and specifications.

You are directed to proceed with these changes. In accordance with Standard Operating Procedure No. 5, no modification to the contract is required if Section B is not affected by these changes.

It is requested that your proposal on page 2 entitled Contractor's Proposal be submitted no later than July 17, 1991. Negotiations, if necessary, will be scheduled following receipt of your proposal. The attached changes are to be incorporated into the as-built drawings and included in your cost report as a separate line item(s).

Please check the appropriate box below, sign in the space provided acknowledging receipt of this letter, and return to this office.

Sincerely,

Attachment

Mark Mailander
Authorized Representative
of the Contracting Officer

Figure C-13

Serial Letter No. 91-0027-258

Is Section B of the contract increased by the attached changes?

Yes_____No_____

Is the budget amount of any WAD No. DSS-108 increased by the attached changes?

Yes_____No_____

Are sufficient reserve funds available in the budget amount for WAD No. DSS-108 to cover the cost of the attached changes?

Yes_____No_____

_____ _____

Dan Keeley, Project Manager Date

Figure C-13 (Cont'd)

Request for Proposal (RFP)

Contractor	Contract No.	WAD No. 108
Hensel Phelps Construction Company 420 Sixth Avenue Greeley, Colorado 80632-0710	DACA45-91-C-0027	RFP No. 039

Project Location and Description

Designated Seismic Sites
Black Hills, South Dakota; Newport, Washington; Tulsa, Okalahoma

A proposal is requested for making the hereinafter described change in accordance with specification and drawing revisions cited herein or listed in attachment thereto. Submit your proposal in space indicated on page 2, attach detailed breakdown of prime and subcontract costs. (See the clause of the contract entitled, "Modification Proposals - Price Breakdown") DO NOT start work under this proposed change until you receive a Notice to Proceed signed by the Contracting Officer or a directive to proceed.

9 July 1991	LAWRENCE E. JACKSON, Chief, Ofc Engr Branch	
Date	Typed Name & Title	Signature

DESCRIPTION OF CHANGE: Pursuant to the clause of this contract entitled, "Changes", the contractor shall furnish all plant, labor and material, and perform all work necessary to accomplish the following described work:

1. SCOPE: Delete Scraping of casing pipe and requirement to circulate water through casing pipe.

2. SPECIFICATION CHANGES: At the end of Specification 02381-10.4, add a third sentence as follows: "Circulating cooling water is required only at Newport Site."

Specification 02381-10.7, delete "scraped, brushed, and" from the sentence.

3. DRAWING CHANGES: None.

Figure C-14

Allocation Summary Report

Construct Designated Seismic Sites
(Total Contract Figures)

Description (WADs)	Negotiated Amount	Current Budget	Current Allocation and Period	Current Obligation	% Obl.	% Com.
Black Hills Site (100s)	1,781,100	1,603,700	1,400,500 1/30/92 complete	876,467	54.6	99
Tulsa Site (200s)	722,000	762,500	704,000 1/30/92 complete	612,684	80.3	99
Newport Site (300s)	813,700	950,600	865,000 1/30/92 complete	699,114	73.5	98
O&M Funded Items (400s)	180,500	180,500	105,000 1/30/92 complete	57,829	32.0	88
Mgt. Fac. OH (501)	227,800	227,800	227,000 1/30/92 complete	176,986	77.7	NA
SUB-TOTAL	3,725,100	3,725,100	3,301,500	2,423,080	NA	NA
Home Office G&A (601)	145,000	145,000	128,400 1/30/92 complete	93,915	64.8	NA
Fixed Fee (701)	309,608	309,608	309,608 1/30/92 complete	274,893	88.8	NA
TOTAL CON-TRACT	4,179,708	4,179,708	3,739,508	2,791,888	86.8	90

Figure C-15

After Action Report

Construct Designated Seismic Sites (DSS)
Contract No. DACA45-91-C-0027
Black Hills, SD: Newport, WA; Tulsa, OK

This cost-plus-fixed-fee contract was awarded to Hensel Phelps Construction Company, Greeley, Co, on 29 January 1991, in the amount of $4,179,708, including $309,608 in fixed fee. At the time of award, the contract drawings and specifications were approximately 80 percent complete. Final design review comments had not yet been received and incorporated.

This construction provided for seismic monitoring facilities for the On Site Inspection Agency (OSIA) at the three locations noted above. The facilities are necessary because of the protocol of the treaty between the United States of America and the Union of Soviet Socialist Republics on the limitation of underground nuclear weapon tests which calls for such seismic monitoring facilities. Each of the seismic sites consists of a borehole for underground test equipment, a cable trench, a subgrade vault for monitoring equipment, a data recording and monitoring facility, an escort facility and an engine driven generator. Also, there is a US/USSR housing facility for the Black Hills site. These seismic test stations will be operated during scheduled nuclear test events at the Nevada Test Site. The nuclear test treaty protocol as signed by the two countries required that the DSS sites be constructed and ready for inspection by 1 August 1991.

The contract was administered very successfully by use of the Work Authorization Directive (WAD) system. A listing of the WADs showing the negotiated amount and the final cost of each, pending final audit, is shown at enclosure 1. The COR was authorized to issue the WADs. This enabled the WADs to be used as a "real time" management tool and greatly contributed to the success of the project. The final cost of the basic contract is $3,626,044.39, an underrun of 13.25%. This does not include $80,413.10, which is the cost of the temporary O&M work added by supplemental agreement (P00006).

The work was functionally complete on 1 July 1991, which was the contract completion date. This was a remarkable effort considering that adverse weather was encountered at both the Newport and Black Hills sites. Deficiencies were corrected on 20 October 1991, and this is the date the one-year warranty period commenced.

Figure C-16

Fourteen standard operating procedures (SOPs) were developed and used during the project. An index of these is included at enclosure 2, and copies of each are available upon request.

The contract was modified a total of nine times. Modification P00001 included reissued drawings to bring the design from 80% to 100%. This modification included the first twenty-eight (28) RFPs. RFPs 29 through 84 are included in the final as-builts, but no modification was required due to the underrun in costs. Modifications 2 through 5 were administrative changes to change project managers, Schedule B of the contract the payment clause, and decrease the contract amount. Modification P00006 was a supplemental agreement to add temporary O&M services until the permanent O&M contract could be put in place. Modification 7 made a WAD adjustment to change the funding mixture, Modification 8 made a line item change, and Modification 9 was to deobligate funds to reflect the final costs.

There was one claim on this contract. It involved Stewart Brothers Drilling Co., Milan, NM, who was a subcontractor to HPCC' for the boreholes at all three sites. At the Black Hills site, the first hole did not meet the specified 3-degree maximum angle for verticality. This hole had to be abandoned and a second hole was drilled. The subcontractor claimed that the Government interfered with his drilling operation, and a claim in the amount of $42,480 for drilling the first hole was submitted. A meeting was held on September 17, 1991 to attempt to resolve the issue. After further consideration, the subcontractor decided not to request a contracting officer's decision and signed a release of claims. All subcontracts have been closed out.

The final pay estimate was submitted 31 March 1992. In accordance with FAR 42.708, it was agreed to use the quick-closeout procedure (see enclosure 3).

Lessons Learned Worksheets 1 through 7 are attached at enclosure 4.

Figure C-16 (Cont'd)

Quick-Closeout Procedure Agreement

Contract No. DACA45-91-c-0027
Construct Designated Seismic Sites

In accordance with FAR 42.708, it is hereby understood and agreed that the quick-closeout procedure will be used to close out this contract.

Subject to verification by Defense Contract Audit Agency (DCAA), the final cost is as follows:

1.	Direct Cost	$3,243,623.24
2.	Home Office G&A (3.89% x (1))	126,176.96
3.	General Liability (0.36% x (1))	12,131.29
4.	Fixed Fee:	324,526.00
	TOTAL	$3,706,457.49

It is further understood and agreed that lines (2), (3), and the above total will be adjusted, if necessary, by applying the formulas shown to the audited Direct Cost (1) as determined by DCAA.

_____ _____
Administrative Contracting Officer Date

_____ _____
Contractor Representative Date

Figure C-17

APPENDIX D

Work Item Procedures

1. Introduction. This appendix addresses standard operating procedures for contracts or delivery orders where WAD procedures are not utilized. Also included is a sample standard operating procedure defining field work item procedures.

2. List of Figures.

a. Figure D-1, Work Item Standard Operating Procedures.

b. Figure D-2, Field Office Property Management Forms.

c. Figure D-3, Work Item Cost and Comparison Report.

d. Figure D-4, Work Item Daily Cost Reports.

3. Sample Project Background. The above figures relate to a construction phase cost reimbursement delivery order issued under a "rapid response" "hazardous, toxic, and radiological waste" (HTW) indefinite delivery contract. WAD procedures are generally not used on rapid response and cost reimbursement delivery orders because of the relatively short duration and small dollar amount. However, basic cost control principles are incorporated similar to those used in WAD procedures. The work item level of cost control is performed at a similar level of detail and procedures as subWADs (described in appendix C).

4. Procedures.

a. Preaward. To the maximum extent practical, work item cost control and schedule procedures shall be planned in advance of construction activities. Although these procedures are not required to be incorporated into an advance agreement, these shall be established detailed field office standard operating procedures (see figure D-1). Contractor and Corps of Engineers relationships shall be fully addressed, and incorporated into the plan.

(1) Cost Analysis. Detailed cost analysis spreadsheets depicting the negotiated settlement are required to perform a standard cost basis for subsequent variance analysis (see figure C-5).

(2) Contract Pricing. Contract payment schedules and payment estimates shall be established to pay by basic work, and

fee subsequent modifications may also be established items.

b. Pre-Site Activities (Preconstruction).

(1) Work Items. Work items comprising the work breakdown structure may be changed, added, or deleted by the field office without prior notification to the District or contracting officer. However, any changes to work item budget amounts that increase a project funded line item estimated cost first require the execution of a contract modification. The Contract Management System (CMS) shall be utilized for requesting contract modifications. Work items need not be incorporated into CMS.

(2) Subcontract Costs. Review and consent of subcontract and purchase order agreements shall be compared to original negotiated budget amounts for the work performed. Budget increases shall be made as appropriate.

c. On-Site Activities (Construction).

(1) Schedule. Schedule analysis may be performed using standard methods independent of cost control. Daily verification of schedule performance is recommended on short duration cost reimbursement delivery orders or contracts.

(2) Reports. Cost and comparison reporting (See figure D-3) by the contractor identifying variances is required on a regular basis at intervals determined appropriate for cost control by the field office. Daily agreement of actual effort, materials, equipment, and field overhead is strongly encouraged for fast track short duration delivery orders or contracts utilizing work item procedures (see figure D-4).

(3) Variance Analysis. Variance analysis shall be performed when significant variances are identified. Comparison of actual costs to standard costs (original negotiated budget amounts) for labor effort, material, equipment, and field overhead shall be performed to determine individual efficiency variances. Corrective action shall be made by the field office as appropriate.

(4) Budget Modifications. The budget shall be reported as often as required for cost control. Formal contract modifications increasing project line item estimated costs shall be initiated via CMS as soon as revised estimated costs negotiations with the contractor are completed.

(5) Payment Estimates. Payment estimates shall be

developed utilizing CMS.

d. Postconstruction.

(1) Audits. The field office must analyze costs, and request audit assistance, to the extent necessary to assure reasonableness of costs and control of unallowable costs. Quick closeout procedures should be ivestigated and utilized when feasible.

(2) After Action Report. After physical completion of all delivery orders and completion of the indefinite delivery umbrella contract, an after action report is required. Separate reports on delivery orders are not required. A sample after action report is provided in figure C-16.

Work Item Standard Operating Procedures

October 1991
Rapid Response Cost Reimbursement Procedures
CEMRO-CD-FC

1. The purpose of this SOP is to outline the Fort Crook Area Office's procedures to effectively manage cost reimbursement delivery orders under the Rapid Response Resident Office umbrella contracts.

2. Emphasis is placed on cost control on the delivery orders because of the unique funding of these projects. Types of monies include Defense Environmental Restoration Program (DERP), Environmental Protection Agency (EPA) Superfund, Operation and Maintenance (O&M), Department of Commerce, Bureau of Land Management, and all types of Department of Defense (DOD) money. In today's monetary environment the availability of funds is tight; therefore, if a cost overrun is anticipated, requests for additional funding must be initiated as soon as possible.

3. To effectively manage a cost reimbursable delivery order, up front planning must be done and the Government and the contractor must work in partnership. Partnering is a new concept for the CE. Old attitudes concerning adversary relationships must be set aside. On the other hand, the contractor must realize that the Government will get involved in his/her day to day operations concerning manpower, equipment usage and subcontractors/purchases. It is the contractors responsibility to provide the manpower to perform all the tasks required of him to effectively manage these reimbursable delivery orders.

4. Prior to award, the following procedures apply:

a. Both Engineering Division, Environmental Branch, Rapid Response Section (CEMRO-ED-ER), and the area office will discuss the scope of work to determine if the delivery order should be a reimbursable delivery order. Typically, rapid response delivery orders are firm fixed or firm fixed with unit prices. There are situations where scope limitations necessitate that a reimbursable delivery order be awarded. Both CEMRO-ED-ER and the area office realize the increased effort that is required to administer these reimbursable delivery orders.

b. As previously stated, planning is the key to successful management. This planning starts prior to preparation of the

Figure D-1

contractors cost proposal. The contractor and the Government must discuss the anticipated scope and derive the work breakdown structure (tasks) that will be required to perform the project. These tasks will later be used as cost control activities to track cost variances. In other words the contractors cost proposal should consist of identifiable tasks on which budgeted costs will be compared against costs obligated to date. In addition, the contractor shall submit subcontractor consent packages to contracting with his cost proposal if these subcontractors can be identified. If approval can be achieved at the contracting level, this eliminates subcontractor consents being analyzed and approved at the area office later on.

c. Fee will be determined at the time of award. It will be based on the anticipated cost of the project multiplied by the negotiated profit factors. This fee will be a fixed fee amount. The contractor will receive 100 percent of the fee. The contractors fee is NOT based on the negotiated profit factor multiplied by his actual costs as this is strictly prohibited by the FAR. The fee shall be treated as a lump sum cost and a portion of the fee paid on the interim progress payments will be determined by the area office. At the completion of the project, the contractor shall receive 100 percent of the fee which was negotiated at the time of award.

5. After award, prior to on-site activities, the following procedures apply:

a. This phase is critical to the successful management of cost reimbursable delivery orders. Prior to any on-site activities the project engineer at the area office must be responsible for coordinating the planning and team effort required between the Government and the contractor. At this time the contractors approved cost proposal shall be reviewed for what the work breakdown structure (tasks) shall consist of based on the most current scope. Certain tasks established in the cost proposal may be combined; i.e., site visit and plan preparation costs (as these should be actual costs at this point in time). Other tasks may require further breakdown; i.e., transportation and disposal which may be one task in the cost proposal may be broken down into transportation of solids, transportation of liquids, disposal of solids, disposal of liquids, etc.

b. A task for the contractors "field overheads" should include all field management and office costs that cannot be applied to specific tasks. A separate task for per diems may be

Figure D-1 (Cont'd)

added to simplify the cost tracking. A home office task may be added if these costs will occur. Also if crew sizes, equipment requirements, or subcontracts have changed, it may be necessary for the contractor to revise his approved cost proposal to reflect the revised or most current scope anticipated. Keep in mind that the revised estimate must equal the awarded amount and that the fee does not change. The emphasis here is that a current (flexible) budget is established based upon the anticipated scope of work and the ability for the contractor to track costs against these tasks.

c. Prior to any on-site mobilization the contractor shall have determined actual costs to date for work performed to date; i.e., site visits, plan preparation. He/she should have the above mentioned work breakdowns (tasks) identified and current anticipated costs (flexible/current budget) associated with them. The contractor should have his/her computerized cost tracking software loaded and ready for use. The contractors cost support person shall be fully trained and knowledgeable concerning the rapid response contract and the scope of the delivery order. The contractor shall have ALL subcontractor consent packages submitted to the Government and must have approval prior to any subcontracts being executed. The contractor must have his/her property management procedures in order.

d. It is the project engineer's responsibility:

(1) to be involved in the determination of the required work breakdown structure to effectively manage costs;

(2) to determine if the contractors approved cost proposal is relevant based on any changes in scope after award;

(3) to be involved in the preparation of the current/flexible budget anticipated for each task;

(4) to make sure that the contractor has an experienced and qualified cost support person;

(5) to make sure all subcontract consent packages have been approved by the Government, either through contracting at the time of award or have been submitted/approved by the ACO;

(6) to make sure the contractor is aware of property management requirements.

Figure D-1 (Cont'd)

6. During On-Site Activities, the following procedures apply:

a. Once the planning phase been effectively managed, the team effort philosophy becomes critical on the job site. The contractor is responsible for performing all of the cost reimbursable functions. The on-site CE representative is responsible that a cost overrun (over obligation) does not occur. Thus, the team effort becomes of the utmost importance. Because the contractor is responsible for managing his costs, the cost support person must be dedicated for this function. This person should not be responsible for the construction management of the project, he/she is responsible for effective cost management and shall be solely dedicated for this.

b. The contractor's on-site project manager and the CE on-site representative must perform in partnership throughout the life of the project. The contractor must get approvals from the Government prior to any purchases. The best way to do this is by providing the on-site CE representative a daily work order every day prior to the next days activity stating what manpower, equipment, and subcontractor/purchases will be required to perform the next day's activities.

c. Because of the unique nature of the rapid response projects; i.e., short duration and funding, WAD procedures which are the traditional CE method of cost control are not used. The rapid response cost control system is based on a daily cost tracking system where actual labor, equipment, purchases, and subcontracts are entered into a spreadsheet. This system is used as a project management tool to capture committed/obligated costs as they occur, not when invoiced as the invoice package lags the project by several months which would be unacceptable for the nature of these projects. These committed costs are applied against the current budgeted task and a variance is then calculated.

d. The contractors cost support person must provide the Government with daily cost reports stating labor, equipment, per diems, field purchases, inventory used, subcontracts, and analytical costs for the Governments approval on a timely basis every day. In addition, a cost to date summary by task must be provided at least on a weekly basis which must include costs obligated to date compared against the current budget. The contractor and the Government must analyze each task to determine the estimated costs to complete each task. This cost will be input into the summary spreadsheet and a variance will be calculated to deter-

Figure D-1 (Cont'd)

mine the cost variance on a task by task basis and on the total delivery order. The fixed fee must be included as a committed cost.

e. The on-site CE representative is responsible for verifying the data input in the daily reports. He/she must verify the personnel on-site and the hours they worked, the equipment on-site and usage, approval of all field purchases, verify inventory being used, have notice/approvals of all subcontracts let, and verify all analytical tests performed. If modifications are added the current budget must reflect those changes.

f. The contractor must include in the daily cost report all committed costs. This is when a work activity occurs that the Government will be responsible for reimbursement, include that work as a committed cost. This relates to transportation and disposal. When contaminated material is excavated, the Government will be required to pay for its transportation and disposal. Each day the estimated removed quantity of material should be considered an obligated cost. If the daily reports contain an unusual item, a comment field is provided to describe the situation. A summary log sheet should also be prepared identifying these comments so they are readily accessible.

7. The following property management procedures apply:.

a. It is the contractor's responsibility in accordance with the advance agreements of the contract to perform property management. The contractor shall have an individual who is responsible for property management. This person must be qualified and completely understand the importance of property management.

b. At the time of purchase, the item must be identified as an expendable (consumed) or non-expendable purchase. For expendable items that are direct charged to a particular project, a log sheet must be prepared by the contractor stating the description of the item, the quantity bought, the quantity consumed, and why the item is considered a consumable. Some instances may require that a photograph be taken of the consumed material, if it is appropriate. It must be noted that small tools which will not be consumed by the project; i.e., taken to the contractors warehouse or taken to the next job, should not be direct costed to the delivery order as they are considered part of the contractors overhead.

Figure D-1 (Cont'd)

c. If the item is non-expendable or not consumed for the project, it must be classified as real property or not. In the rare instances where real property is placed (storage sheds, fence, pumps, etc.), a DD 1354, Transfer and Acceptance of Military Real Property, must be prepared at DOD facilities. If it is not real property, then it must be turned over to the user, typically the Defense Reutilization and Marketing Office (DRMO), at demobilization at the conclusion of the project. The contractor must keep complete detailed records consisting of description of item, purchase price, quantity bought, and a record of transmittal when the items are turned over to the user.

d. If any item is originated from the contractor's inventory, detailed transaction records must be prepared. These items must be described as expendable or non-expendable. The on-site CE representative must verify receipt of materials and verify quantities. A periodic inventory must occur (at least bi-weekly) to verify and monitor usage of the material. The contractor must input on his/her daily cost reports estimated quantities consumed for the day. After the periodic inventory, the estimated amount consumed must be reconciled against actual usage with an adjustment to the next days cost report to reflect actual usage.

8. The following invoice and disbursement of payment procedures apply:

a. The contractor shall submit periodic invoice packages to the Fort Crook Area Office. The invoice package must only contain costs which the contractor has paid. The contractor must certify that submitted costs are those in which the contractor requires reimbursement as these vouchers have been paid to all suppliers and subcontractors. The invoice shall contain a summary cost sheet stating; direct labor paid and applicable mark ups with the percentages shown, equipment (owned), per diems, field purchases, inventory items consumed, subcontractors who have been paid, and analytical costs. All applicable markups must be clearly identified with percentage rates shown. General and administrative markups along with facilities cost of capital of money (FCCOM) must be broken out. The contractor may request a certain percentage of the fixed fee be paid.

b. The invoice package must contain detailed backup for each of the costs invoiced. Because of the level of effort required to review these packages, the contractor is requested to organize the vouchers to speed up the review process.

Figure D-1 (Cont'd)

c. Payroll should be sorted to identify personnel on a daily basis (daily sort) showing hours worked that day including straight time and overtime. The payroll should also be sorted by individual showing straight time and overtime hours worked, direct wages paid, and applicable labor burdens. Furthermore, a variance analysis shall be performed shown on an individual basis comparing hours shown and approved on the daily cost report vs. hours billed in the invoice. If there is a variance, an explanation will be required. It is not the Government's intent to hold the contractor to only what is shown on the field daily cost reports as certain hours may not have been input, but the contractor must identify and explain the variance.

d. Equipment (owned) must be presented in a similar format with the variance shown against the daily cost reports. The contractor must be able to verify and explain owned equipment rates based on the advance agreements.

e. Per Diems shall be reimbursed based on the advance agreements. A summary sheet will be prepared with a daily record of expenses. A variance report will be prepared. Hotel bills must be provided to substantiate payment. For contractor personnel traveling, the quarter sorn Travel Regulation system shall be used.

f. Field purchases shall contain a daily summary stating description, quantity, and cost. The daily field cost report with original invoices that have been paid should be included.

g. Subcontractor costs shall only be for the costs the contractor has previously reimbursed the subcontractor. Analytical costs should contain services performed to date.

h. The invoice review policy is as follows: A copy of the daily field cost reports shall be forwarded to Missouri River Division Audit Office Omaha (CEMRD-AO-O) on a periodic basis. The contractor shall submit three copies of the entire invoice package to the area office. At this time, it will be logged in. A copy will be sent to CEMRD-AO-O. A copy will be given to the project engineer and a copy will be filed. At this time, the ENG Form 93, Payment Estimate, and ENG Form 4480, Contract Performance and Accounting Entry/Reference Document, will be prepared for the contractor's invoiced amount and forwarded to CEMRD-AO-O. The auditors will begin the review of the package comparing it to the daily cost reports. The project engineer and their on-site representative will review the package and make comments which

Figure D-1 (Cont'd)

are forwarded to CEMRD-AO-O. Upon review by the auditors, adjustments will be made, if any, and a correction will be made on the ENG Form 93 and ENG Form 4480 and forwarded to the Omaha District for disbursement. A copy of the corrected ENG Form 93 will be returned to the area office to adjust their books. The auditors will contact the contractor to discuss question costs. If the invoiced amount is reduced, the auditors will provide the contractors with a written explanation for any nonapproved costs. CEMRD-AO-O has authority to approve interim progress payments for both IT Corp. and OHM Corp. The Defense Contract Audit Agency (DCAA) and EPA have responsibility for approval of final payment respectively.

i. It can be concluded that a substantial amount of effort is required to administer a cost reimbursable delivery order. It is of the utmost importance that a substantial level of effort be put forth in the planning stages, and both the contractor and Government act as a team to effectively manage these delivery orders.

Figure D-1 (Cont'd)

REPORT OF CONSUMABLE ITEMS USED TO COMPLETE COST-REIMBUSABLE CONTRACT

CONTRACT NO.		DELIVERY ORDER NO
CONTRACTOR	DELIVERY ORDER NAME/LOCATION	
ITEM	UNITS	☐ CHARGED PER PURCHASE ☐ CHARGED AS CONSUMED

PERIOD COVERED	DATE	QUANTITY	UNIT COST	TOTAL COST		DATE	QUANTITY	UNIT COST	TOTAL COST	PERIOD COVERED
					PURCHASED					
					CONSUMED					
					REMAINING					
					PURCHASED					
					CONSUMED					
					REMAINING					
					PURCHASED					
					CONSUMED					
					REMAINING					
					PURCHASED					
					CONSUMED					
					REMAINING					
					PURCHASED					
					CONSUMED					
					REMAINING					
					PURCHASED					
					CONSUMED					
					REMAINING					

REMARKS

Figure D-2

REPORT OF NONEXPENDABLE GOVERNMENT PROPERTY ACQUIRED BY CONTRACTOR

CONTRACT NO.

REPORT NO.

CONTR VOUCHER NO.

DATE

CONTRACTOR AND ADDRESS

INSTRUCTIONS TO CONTRACTOR

(a) Submit original to Property Administrator

(b) A copy of this report MUST be attached to voucher submitted to support claim for reimbursement

LIST BELOW EACH ARTICLE OF NONEXPENDABLE PROPERTY

QTY	NOMENCLATURE/DESCRIPTION (Including manufacturer's name)	DATE ACQ'D	MODEL NUMBER	MFG SERIAL NUMBER	DECAL OR ID NUMBER	UNIT COST	TOTAL COST

SAMPLE

NAME AND ADDRESS OF PROPERTY ADMINISTRATOR

PURCHASE AUTHORIZATION

☐ ARTICLE

OF CONTRACT

☐ CONTRACTING OFFICER'S LETTER OF APPROVAL DATED)

☐ OTHER (explain)

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE

TITLE

VOUCHER NO.

DATE

Figure D-2 (Cont'd)

Printed: 10/16/91

INTERNATIONAL TECHNOLOGY CORPORATION
HOLLOMAN AFB SOIL REMOVAL
ALAMOGORDO NEW MEXICO
Job to Date Budget Variance Report (As of 10/15/91)

Task Number	Task Description	Current Budget	Spent To Date	Estimate Costs to Complete	Estimated Final Costs	(Overruns) or Underruns	Project Completion %
001	SITE VISITS/WORK PLANS/INITIAL TANK SEARCH	20436.00	58222.06	0.00	58222.06	(37,786.06)	100
00201	MOBILIZATION	30659.00	17826.01	0.00	17826.01	12832.99	100
00202	DEMOBILIZATION	20998.00	1873.31	19124.69	20998.00	0.00	5
003	SITE PREP/INSTALL LINER	48142.00	14339.41	33802.59	48142.00	0.00	29
00401	SITE 47 SOIL/TANK REMOVAL - EXCAVATION	50497.00	12492.20	38004.80	50497.00	0.00	18
00402	SITE 47 SOIL/TANK REMOVAL - BACKFILL	14591.00	150.08	14440.92	14591.00	0.00	1
00501	SITE OT 45 SOIL REMOVAL - EXCAVATION	40549.00	36092.19	0.00	36092.19	4456.81	100
00502	SITE OT 45 SOIL REMOVAL - BACKFILL	14476.00	12579.39	1896.61	14476.00	0.00	98
006	FINAL REPORT	9526.00	0.00	9526.00	9526.00	0.00	0
007	SITE INDIRECTS SITE MGT,H&S,PER DIEM	189202.00	120765.56	68436.44	189202.00	0.00	65
008	HOME OFFICE SUPPORT	20005.00	3403.14	16601.86	20005.00	0.00	20
009	ANALYTICAL	6800.00	14644.03	14000.00	28644.03	(21,844.03)	50
	TOTAL	465881.00	292387.38	215833.91	508221.29		
	FEE	34220.00			34220.00		
	FINAL COSTS	500101.00			542441.29	(42,340.29)	(Overrun)

Figure D-3

Printed: 10/16/91

INTERNATIONAL TECHNOLOGY CORPORATION
HOLLOMAN AFB SOIL REMOVAL
ALAMOGORDO NEW MEXICO
Job to Date Cost Report (As of 10/15/91)

Task Number	Task Description	Personnel Costs	Equipment Costs	Material Costs	Per Diem Costs	Subcontract Costs	Analytical Costs	Total Costs
001	SITE VISITS/WORK PLANS/INITIAL TANK SEARCH	0.00	0.00	58222.06	0.00	0.00	0.00	58222.06
00201	MOBILIZATION	10755.07	1378.96	5691.98	0.00	0.00	0.00	17826.01
00202	DEMOBILIZATION	1033.62	0.00	839.69	0.00	0.00	0.00	1873.31
003	SITE PREP/INSTALL LINER	10394.19	3671.37	273.85	0.00	0.00	0.00	14339.41
00401	SITE 47 SOIL/TANK REMOVAL - EXCAVATION	11815.28	0.00	676.92	0.00	0.00	0.00	12492.20
00402	SITE 47 SOIL/TANK REMOVAL - BACKFILL	0.00	0.00	150.08	0.00	0.00	0.00	150.08
00501	SITE OT 45 SOIL REMOVAL - EXCAVATION	36050.73	0.00	41.46	0.00	0.00	0.00	36092.19
00502	SITE OT 45 SOIL REMOVAL - BACKFILL	12574.84	0.00	4.55	0.00	0.00	0.00	12579.39
006	FINAL REPORT	0.00	0.00	0.00	0.00	0.00	0.00	0.00
007	SITE INDIRECTS SITE MGT,H&S,PER DIEM	35028.98	48951.96	14213.46	22571.22	0.00	0.00	120765.56
008	HOME OFFICE SUPPORT	3403.14	0.00	0.00	0.00	0.00	0.00	3403.14
009	ANALYTICAL	0.00	0.00	24.03	0.00	0.00	14620.00	14644.03
	TOTAL	121055.79	54002.29	80138.08	22571.22	0.00	14620.00	292387.38

Figure D-3 (Cont'd)

AS OF 09/13/91

SUMMARY REPORT BY TASK FOR SUISUN BAY CLEANUP, BENICIA CALIFORNIA

TASK	ORIGINAL BUDGET	CURRENT BUDGET	PENT/OBLIGATE TO DATE	ESTIMATED COSTS TO COMPLETE	ESTIMATED FINAL COSTS	(OVERRUNS) OR UNDERRUNS	PROJECT COMPLETION %
P1T1 - MEETINGS	$9,423.00	$2,423.00	$1,956.00	$0.00	$1,956.00	$467.00	100%
P1T2 - SITE VISIT	$2,449.00	$2,149.00	$2,144.00	$0.00	$2,144.00	$5.00	100%
P1T3 - PLANS&SUBMITTALS	$21,102.00	$11,502.00	$11,429.00	$0.00	$11,429.00	$73.00	100%
P1T4 - FIELD SAMPLING	$4,836.00	$4,036.00	$3,971.00	$0.00	$3,971.00	$65.00	100%
P1T5 - LAB ANALYSIS	$20,804.00	$20,104.00	$20,011.00	$0.00	$20,011.00	$93.00	100%
P1T6 - MOBE	$26,904.00	$26,904.00	$6,828.75	$1,205.07	$8,033.82	$18,870.18	85%
P1T7 - ADMIN&SUPPORT	$314,877.00	$314,877.00	$144,204.00	$176,249.33	$320,453.33	($5,576.33)	45%
P1T8 - SITE PREP	$33,177.00	$21,177.00	$19,557.00	$0.00	$19,557.00	$1,620.00	100%
P1T9 - REMOVE TRASH	$13,917.00	$18,917.00	$14,201.00	$4,733.67	$18,934.67	($17.67)	75%
P1T10 - WABASH CLEAN/DI	$180,868.00	$180,868.00	$130.92	$180,868.00	$180,998.92	($130.92)	0%
P2T1 - PURDUE SAMP/OVP	$141,508.00	$74,230.00	$59,384.00	$14,846.00	$74,230.00	$67,278.00	80%
P2T2 - OVERPACK OTH SHI	$69,711.00	$293,111.00	$125,890.00	$41,963.33	$167,853.33	($74,742.33)	75%
P2T3 - CONT PACK REMOV	$68,368.00	$68,368.00	$0.00	$68,368.00	$68,368.00	$0.00	0%
P2T4 - TEARDOWN	$6,481.00	$6,481.00	$0.00	$6,481.00	$6,481.00	$0.00	0%
P2T5 - ANALYSIS/PROFILIN	$102,000.00	$102,000.00	$24,780.00	$74,340.00	$99,120.00	$2,880.00	25%
P2T6 - FINAL REPORT	$23,412.00	$23,412.00	$0.00	$23,412.00	$23,412.00	$0.00	0%
P2T7 - DEMOBE	$8,157.00	$8,157.00	$369.00	$11,931.00	$12,300.00	($4,143.00)	3%
P2T8 - TRANS&DISP							
PERSONNEL	$99,081.00	$99,081.00	$36,478.00	$36,478.00	$72,956.00	$26,125.00	50%
TRANS	$149,401.00	$149,401.00	$0.00	$149,401.00	$149,401.00	$0.00	0%
DISPOSAL	$326,836.00	$326,836.00	$0.00	$326,836.00	$326,836.00	$0.00	0%
P2T9 - CRANE&BARGE	$339,995.00	$339,995.00	$144,572.00	$176,699.11	$321,271.11	$18,723.89	45%
P2T10 - CYLINDERS	$0.00	$2,000.00	$1,621.30	$0.00	$1,621.30	$378.70	100%
P3T1 - PER DIEMS	$80,355.00	$80,355.00	$29,725.00	$36,330.56	$66,055.56	$14,299.44	45%
P3T2 - FEE	$147,551.00	$147,551.00	$147,551.00	$0.00	$147,551.00	$0.00	100%
TOTAL	$2,191,213.00	$2,191,213.00	$794,802.97	$1,330,142.07	$2,124,945.04	$66,267.96	

Figure D-3 (Cont'd)

P1T9: REMOVE TRASH REPORT DATE 16-Sep-91

ESTIMATE OF PERCENT COMPLE 75%
(INCLUDES ADDs AND DEDUCTs)

CALCULATIONS:	A BUDGETE	B ADDs/DE TO BUD	C EXPENDED TO DATE	D % MPLE	E BUDGET PROJECT @ COMPLETION (C/D)	F ACTUAL BUDGET VARIANCE e-(A+B)	G ESTIMATED TO COMPLETE (e-c)
PERSONN	$7,332	$0	$9,129	75%	$12,173	$4,841	$3,043
PER DIEM	$0	$0	$0	75%	$0	$0	$0
EQUIPME	$0	$0	$0	75%	$0	$0	$0
INVENTO	$478	$0	$813	75%	$1,084	$606	$271
ETC LAB	$0	$0	$0	75%	$0	$0	$0
OHM TOT	$7,810	$0	$9,943		$13,257	$5,447	$3,314
FIELD PU	$125	$0	$612	75%	$816	$691	$204
SUBS	$5,982	$5,000	$3,646	75%	$4,862	($6,120)	$1,215
TASK TOT	$13,917	$5,000	$14,201		$18,935	$18	$4,734

TASK FUNDING NEEDS SUMMARY:

ESTIMATED AT COMPLETION TOTAL (E):	$18,935	
BUDGETED TOTAL (A+B):	$18,917	
SURPLUS FUNDS AVAILABLE	$0	<----------
ESTIMATED TO COMPLETE (ADDN FUNDS NEEDE	$18	<----------

COMMENTS:

Figure D-3 (Cont'd)

Work Item Daily Cost Reports

Daily Labor Cost Report

Date: October 16, 1991
Project: Tanks/Soil Removal, Holloman AFB
Job Number: 519005
Day: 10/15/91

Emp. ID	Title	Phase	Task	Sub Task	Base Hours	Base Rate	O/T Hours	O/T Rate	Prem Hours	Prem Rate	Total Costs
LF383	Project Mgr I	007			11.00	73.89					812.79
LF100	Project Adm I	007			10.50	40.12					421.26
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF088	Equip Oper I	004	01		9.00	49.17					442.53
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF040	Field Tech I	004	01		10.00	36.94					369.40
LF086	Equip Oper I	004	01		10.00	42.69					369.40
LF088	Equip Oper I	005	02		1.00	49.17					49.17
									Estimated Total		4,311.55

Comments:

Corps Representative

Rate approvals subject to final audit

Contractor Representative

Figure D-4

Daily Material Cost Report

Date: October 16, 1991
Project: Tanks/Soil Removal, Holloman AFB
Day: 10/15/91

Job No.: 519005

Description	Quantity	Payment Method	P.O. No.	Est Amount	Mark Up	Total
Water	6.00	mat'l		1.29	0.95	8.69
Work gloves	3.00	mat'l		1.91	0.70	6.43
visqueen	3.00	mat'l		65.75	24.13	221.38
642 OV cartridge	6.00	mat'l		11.52	8.45	77.57
Diesel & gas for equip.	1.00	check		336.90	41.21	378.11
Motor oil	1.00	cash		7.60	0.93	8.53
					Estimated Total	700.71

Comments:

Three cartridges used on Monday & three cartridges used on Tuesday.

Corps Representative

Rate Approvals subject to final audit

Contractor Representative

Figure D-4 (Cont'd)

Daily Equipment Cost Report

Date: October 16, 1991
Project: Tanks/Soil Removal, Holloman AFB
Day: 10/15/91

Job No.: 519005

Product Code	Description	Start Time	Finish Time	Idle Time	Units	Unit Charge	Mark up	Total
TF530	Stake bed truck, 2 ton	7:00	17:00	10:00	10.00	2.66	0.00	26.60
TD150	8 yd dump truck	7:00	17:00	: 0	10.00	25.35	0.00	253.50
TM054	Lowboy, trailer	7:00	17:00	10:00	10.00	2.20	0.00	22.00
TM202	Passanger Van	7:00	17:00	: 0	10.00	6.46	0.00	64.60
TM202	Passanger Van	7:00	17:00	: 0	10.00	6.46	0.00	64.60
VC218	710 Backhoe	: 0	: 0	9:00	9.00	5.10	0.00	45.90
GC115	Compressor, 250 CFM	: 0	: 0	10:00	10.00	1.45	0.00	14.50
PJ001	Porto John	: 0	: 0	: 0	3.00	4.29	1.57	14.44
OT001	Office Trailer	: 0	: 0	: 0	1.00	15.51	1.90	17.41
OF001	Office Furniture	: 0	: 0	: 0	1.00	9.31	1.14	10.45
DT001	Dump Truck	: 0	: 0	: 0	3.00	164.85	60.49	555.04
WT001	Water Truck	: 0	: 0	: 0	1.00	189.00	23.12	212.12
WL001	844 Wheel Loader	: 0	: 0	: 0	1.00	875.00	107.02	982.02
CP001	Computer	: 0	: 0	: 0	1.00	29.00	3.55	32.55
HN001	HNU	: 0	: 0	: 0	1.00	51.00	6.24	57.24
ET001	Excavator/trackhoe	: 0	: 0	: 0	1.00	799.00	97.73	896.73
NT086	Rental Car-A.Mercado	: 0	: 0	: 0	1.00	45.00	5.50	50.50
NT087	Rental Car-D.Grant	: 0	: 0	: 0	1.00	45.00	5.50	50.50
VC219	710 Backhoe	10:00	11:00	: 0	1.00	25.39	0.00	25.39

7

Estimated Total 3,396.09

Comments:

Corps Representative

Rate Approvals subject to final audit

Contractor Representative

Figure D-4 (Cont'd)

Daily Per Diem Cost Report

Date: October 16, 1991
Project: Tanks/Soil Removal Holloman AFB
Day: 10/15/91

Job No.: 519005

Title	Hotel Rate	Mark-Ups	Total	Allow. (JTR)	Meals	Mark Ups	Total	Allow. (JTR)	Total PrDiem
Project Manager I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Project Admin. I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Equip Operator I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Equip Operator I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
Field Tech I	38.15	4.67	42.82	64.00	34.00	4.18	38.18	34.00	80.99
							Estimated Total		809.90

Comments:

Corps Representative

Rate Approvals subject to final audit

Contractor Representative

Figure D-4 (Cont'd)

APPENDIX E

Expenditure Reports And Vouchers

1. Introduction. This appendix provides sample payment estimates, public voucher forms, accounting entry reference documents and contractor support data for invoices.

2. List of Figures.

a. Figure E-1, Payment Estimate (ENG Form 93)

b. Figure E-2, Public Voucher For Purchases and Services Other Than Personal (SF 1034/1035)

c. Figure E-3, Accounting Entry Reference Document (ENG Form 4480).

PAGE 1 OF 2 PAGES

PAYMENT ESTIMATE - CONTRACT PERFORMANCE

Date: 3 Jun 92

CONTRACTOR:
Roy F. Weston, Inc.
Weston Way
West Chester, Pennsylvania 19380

CONTRACT NO.
DACW45-90-D-0015
DELIVERY ORDER NO. 3

APPROPRIATION AND PROJECT

DISTRICT: Omaha

DESCRIPTION OF WORK:
Construct Incineration System &
Related Activities

PERIOD COVERED BY THIS ESTIMATE
FROM: 28 Mar 92 THRU: 24 Apr 92

ESTIMATE NO:
DO 3-11-Partial

LOCATION:
Rocky Mountain Arsenal, CO (RMA)

		CONTRACT			TOTAL TO DATE	
WAD NO. A	DESCRIPTION B	QUANTITY AND UNIT C	UNIT PRICE D	BUDGETED AMOUNT E	QUANTITY AND UNIT F	AMOUNT G
1	Sitework	Job	L.S.	700,561.00	44.82%	314,020.64
2	Miscellaneous Buildings	Job	L.S.	1,001,505.00	42.78%	428,470.00
3	SQI Building	Job	L.S.	6,146,628.00	22.66%	1,393,074.41
4	Prepurchased Equipment	Job	L.S.	1,258,236.00	50.88%	640,237.11
5	Interconnecting Systems	Job	L.S.	863,531.00	27.41%	236,702.12
		TOTAL	CONTRACT:	30,918,958.00	TOTAL EARNINGS TO DATE:	5,989,115.86

SAMPLE

14.

A.	PREVIOUS DEDUCTIONS:	0.00	
B.	PREVIOUS RETAINED:	0.00	
C.	PREVIOUS PAYMENTS:	5,886,867.28	
D.	PREVIOUS EARNINGS (A+B+C):		5,886,867.28
E.	EARNINGS THIS PERIOD: (TOTAL EARNINGS MINUS D):		102,248.58
F.	LESS RETAINED PERCENTAGE:	0.00	
G.	LESS DEDUCTION:	0.00	
H.	TOTAL DEDUCTION (F+G):		0.00
I.	RETAINAGE REFUNDED:	0.00	
J.	OTHER REFUNDS:	0.00	
K.	TOTAL REFUNDS THIS PERIOD:		0.00
L.	AMOUNT DUE CONTRACTOR (E-H+K):		102,248.58

15. RECAPITULATION:

TOTAL RETAINED PCTG. (B+F-I):	0.00
TOTAL PAID (C+L):	5,989,115.86

Approved for Payment:

[signature]

JUN 03 1992

CONTRACTING OFFICER APPROVAL (Signature)

ENG Form 93-B, Electronic version approved by Hq USACE, 15 March 1987.

COST R[illegible]RSABLE
CONTRACT NO. DACW45-90-D-0015
PAYMENT NO. 3

[illegible] for payment after office [illegible] attached "determination [illegible] and/or disapproved," subject [illegible] contractor's basic accounting [illegible]

[signature]
Auditor
6/4/92
Date

Figure E-1

Completion Schedule	Completion Date	Modifications	Revised Completion Date	Date All Work Substantially Complete
Entire Work	6 Oct 92			

WAD NO. A	DESCRIPTION B	CONTRACT QUANTITY AND UNIT C	CONTRACT UNIT PRICE D	CONTRACT BUDGETED AMOUNT E	TOTAL TO DATE QUANTITY AND UNIT F	TOTAL TO DATE AMOUNT G
6	Test and Checkout	Job	L.S.	0.00	0.00%	0.00
7	Field Indirects	Job	L.S.	607,312.00	53.69%	326,058.04
8	Weston Field Personnel	Job	L.S.	2,008,168.00	53.02%	1,064,729.44
9	Weston Home Office	Job	L.S.	1,856,424.00	55.48%	1,029,986.97
10	Travel and Subsistance	Job	L.S.	257,524.00	34.77%	89,540.31
11	Fee	Job	L.S.	936,175.00	38.89%	364,048.24
12	Home Office Plan Preparation	Job	L.S.	325,147.00	17.01%	55,313.61
13	Home Office Mobilization	Job	L.S.	566,109.00	1.58%	8,944.70
14	Home Office Startup	Job	L.S.	714,313.00	0.00%	0.00
15	Home Office Trial Burn and Rep	Job	L.S.	543,392.00	0.00%	0.00
16	Home Office Operation and Main	Job	L.S.	262,923.00	0.00%	0.00
17	Recurring Engineering	Job	L.S.	191,902.00	0.00%	0.00
18	Home Office Project Support	Job	L.S.	1,820,351.00	1.67%	30,427.71
19	Tank/Pond Decon Support	Job	L.S.	17,262.00	0.00%	0.00
20	Field Mobilization	Job	L.S.	1,170,523.00	0.00%	0.00
21	Field Startup	Job	L.S.	3,037,449.00	0.00%	0.00
22	Field Operation and Maintenanc	Job	L.S.	3,902,925.00	0.00%	0.00
23	Pond and Tank Management	Job	L.S.	400,814.00	0.00%	0.00
24	Field Office Support	Job	L.S.	1,222,892.00	0.00%	0.00
25	Startup Fee	Job	L.S.	1,106,892.00	0.68%	7,562.56

ENG Form 93-E, Electronic version approved by Hq USACE, 15 March 1987.

Standard Form 1034
Revised January 1989
Department of the Treasury
TFRM 6-2000

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

VOUCHER NO. 11

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION
Department of the Army
Omaha District, Corps of Engineers
1612 US Post Office & Courthouse
Omaha, Nebraska 68102-4978

DATE VOUCHER PREPARED: 11 May 1992
CONTRACT NUMBER AND DATE: DACA45-91-C-0110
REQUISITION NUMBER AND DATE:

SCHEDULE NO. 1 of 9
PAID BY

PAYEE'S NAME AND ADDRESS
Hensel Phelps Construction Co.
P.O. Box O
Greeley, CO 80632

DATE INVOICE RECEIVED
DISCOUNT TERMS
PAYEE'S ACCOUNT NUMBER

SHIPPED FROM | TO | WEIGHT | GOVERNMENT B/L NUMBER

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)	QUANTITY	UNIT PRICE COST	UNIT PRICE PER	AMOUNT (1)
	04-10-92 thru 05-10-92	For detail, See SF 1035 Continuation Sheet, total amount claimed transferred from Page 2, SF 1035				132,196.85

SAMPLE

Use continuation sheet(s) if necessary. (Payee must NOT use this space below) TOTAL 132,196.85

PAYMENT:
☐ PROVISIONAL
☐ COMPLETE
☐ PARTIAL
☐ FINAL
☐ PROGRESS
☐ ADVANCE

APPROVED FOR Provisional Payment subject to later audit
EXCHANGE RATE = $1.00
BY:
TITLE Auditor, Defense Contract Audit Agency
DIFFERENCES
Amount verified; correct for
(Signature or initials)

Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.

(Date) (Authorized Certifying Officer)[4] (Title)

ACCOUNTING CLASSIFICATION

PAID BY
CHECK NUMBER | ON ACCOUNT OF U.S. TREASURY | CHECK NUMBER | ON (Name of bank)
CASH $ | DATE | PAYEE[3]

[1] When stated in foreign currency, insert name of currency.
[2] If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the space provided, over his official title.
[3] When a voucher is receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.

PER
TITLE

Previous edition usable 1034-119-08

PRIVACY ACT STATEMENT
The information requested on this form is required under the provisions of 31 U.S.C. 82b and 82c, for the purpose of disbursing Federal money. The information requested is to identify the particular creditor and the amounts to be paid. Failure to furnish this information will hinder discharge of the payment obligation.

1

Figure E-2

Standard Form 1035
7 GAO 5000
1035-114-35
Exception approved by NARS 10-77

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

CONTINUATION SHEET

VOUCHER NO. 11
SCHEDULE NO.
SHEET NO. 2 of 9

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT: Department of the Army, Omaha District, Corps of Engineers

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)	QUANTITY	UNIT PRICE COST	UNIT PRICE PER	AMOUNT

Hensel Phelps Construction Co.
P.O. Box O
Greeley, CO 80632

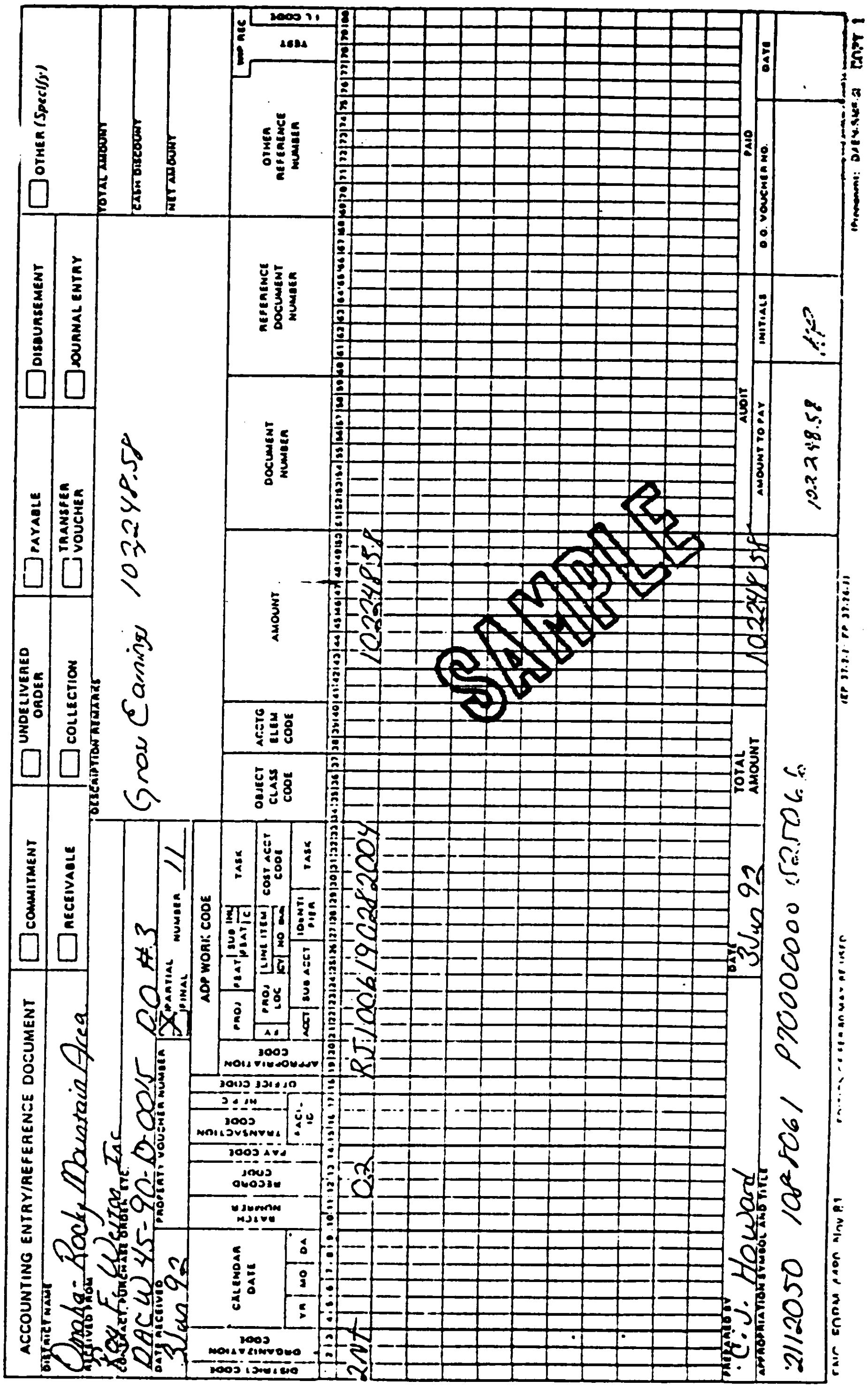
Contract No.
DACA45-91-C-0110
Cost of Recap of WAD's 1-9

Analysis of Claimed Current and Cumulative Costs

Major Cost Elements	Amount for Current Period Billed	Cumulative Amount from Inception to Date of this Billing
WAD 1	0.00	33,920.03
WAD 2	0.00	0.00
WAD 3	27,337.62	304,921.30
WAD 4	4,432.16	40,461.42
WAD 5	2,817.16	25,717.85
WAD 6	0.00	45,143.00
WAD 7	9,771.16	405,128.68
WAD 8	19,685.51	316,828.64
WAD 9	68,153.24	81,965.50
TOTAL	132,196.85	1,254,086.42

SAMPLE

Figure E-2 (Cont'd)


ACCOUNTING ENTRY/REFERENCE DOCUMENT

☐ COMMITMENT ☐ UNDELIVERED ORDER ☐ PAYABLE ☐ DISBURSEMENT ☐ OTHER (Specify)
☐ RECEIVABLE ☐ COLLECTION ☐ TRANSFER VOUCHER ☐ JOURNAL ENTRY

DISTRICT NAME: Omaha-Rocky Mountain Area
RECEIVED FROM: Fox F. Weiton Inc
CONTRACT, PURCHASE ORDER, ETC.: DACW45-90-D-0015 RO #3
DATE RECEIVED: 3 Jun 92
PROPERTY VOUCHER NUMBER: X PARTIAL ☐ FINAL NUMBER 11
DESCRIPTION REMARKS: Gross Earnings 1022485.8
TOTAL AMOUNT / CASH DISCOUNT / NET AMOUNT

DISTRICT CODE | ORGANIZATION CODE | CALENDAR DATE (YR MO DA) | BATCH NUMBER | RECORD CODE | PAY CODE | TRANSACTION CODE | FACIL-IC | OFFICE CODE | APPROPRIATION CODE | ADP WORK CODE | OBJECT CLASS CODE | ACCTG ELEM CODE | AMOUNT | DOCUMENT NUMBER | REFERENCE DOCUMENT NUMBER | OTHER REFERENCE NUMBER | WIP REC

2NT 02 RJ1006L19082004 1022485.8

PREPARED BY: C.J. Howard DATE: 3 Jun 92 TOTAL AMOUNT: 1022485.8
APPROPRIATION SYMBOL AND TITLE: 2112050 1084061 P70000000 S2506.5
AUDIT: AMOUNT TO PAY 1022485.8 INITIALS
PAID: D.O. VOUCHER NO. DATE

SAMPLE

ENG FORM 4490 Nov 81

Figure E-3

APPENDIX F

Sample Consent Procedures

1. Introduction. This appendix provides sample field office consent procedures and review check lists.

2. List of Figures.

a. Figure F-1, Field Office Consent Procedure

b. Figure F-2, Solicitation/Subcontract Review-Office Engineering Branch Checklist

c. Figure F-3, Solicitation/Subcontract Review Technical Checklist

d. Figure F-4, Authorized Representative of the Contracting Officer Letter.

Field Office Consent Procedure

1. Purpose. To establish a uniform procedure for review and granting consent to subcontract actions of $25,000 or more, if subcontract is entered into on a cost-type basis, experimental, developmental, or research in purpose or acquisition of special test equipment in excess of $10,000.

2. Applicability. This procedure is applicable to all personnel involved with review of subcontract actions.

3. Definition. The term subcontract, as used herein, includes construction; acquisition of supplies, materials, and equipment; performance of services; rental/lease agreements; and any other contractual arrangement regardless of contractual instrument.

4. References.

a. FAR 52.244-2

b. Contract clauses entitled "subcontracts (Cost-Reimbursement and Letter Contract") CC68, DACW45-89-D-0504

c. Advance agreement No. 4, Logistics Management Plan, DACW-45-89-D0504

5. Procedure.

a. Consent is a before the fact type action. Any request for consent after the fact will be treated as a ratification action in accordance with this procedure and not as a consent action. All expenditures through a subcontract requiring consent for which consent was not granted or was not later ratified by the contracting officer representative (COR) would be treated as a disallowed cost, as appropriate.

b. Data to be submitted by the contractor for each consent request are set forth in contract Clause 68 and Advance Agreement No. 4.

c. Assignment of responsibilities during consent review of a subcontract are as follows: (These are minimum, not limits.)

(1) Denver Resident Office.

(a) Receives and maintains a log of each

solicitation and follow-on request for consent or ratification. This log should, as a minimum, provide for the cost account number, solicitation number, general description, date request received, type of action consent/ratification, disposition, and date of COR's action.

(b) Provides copies of each solicitation to Office Engineering Branch and Resident Staff with suspense dates for completion and return of procurement review. (See Figure F-2, Solicitation/Subcontract Review-Office Engineering Branch Checklist and Figure F-3, Solicitation/subcontract Review-Technical-Checklist. The proposed subcontract and supporting documentation will be coordinated through the Office of Counsel when required.

(c) Maintains files on all subcontract by delivery order and subcontract numeric sequence. Engineering will coordinate all the responses into a final package and submit with recommendation to consent/ratify or nonconsent/nonratify and appropriate comments to the Resident Engineer for review and concurrence.

(2) Resident Staff.

(a) Review the proposed subcontract, (See enclosure 2).

(b) Determine conformance of the proposed subcontract to Government procurement regulations, applicable design drawings, specifications, and good construction practices.

(c) Ensure the proposed subcontract specifications comply with all applicable Federal specifications, military specifications, military standards, or other specifications.

(d) Determine provisions are made for required technical data such as drawings and technical manuals.

(e) Option provisions. Should there have been options, is the quantity reasonable, etc.

(f) Is the purchase description adequate?

(g) Review the quality control procedures.

(h) Verify the proposed subcontract delivery

Figure F-1

schedule meets the construction schedule for the prime contract and the proposed subcontract delivery schedule is realistic.

(3) Resident Engineer.

(a) Review the proposed subcontract package and enclosures. Determine if a review by the Office of Counsel is required.

(b) If review is required, he/she will forward to the Office of Counsel with a suspense date.

(c) Upon receipt of all comments regarding a consent/ratification review, the authorized COR will sign the letter (consent or ratification figure 3, page F-9). The consent/ratification will then be sent to the contractor.

(4) Legal Counsel. Review consent packages for legal sufficiency, and upon completion of the review, a written report, signed and dated, should be prepared and attached to the request for consent package. The report should indicate concurrence with the request for consent or point out any problem areas they recommend resolving prior to consent.

d. The review of ratification action requests should follow the same procedure as for consent reviews. All requests for ratification should be accompanied by a statement from the contractor stating why the action was not submitted for consent, who (by name) was responsible for failure to submit the subcontract for consent, disciplinary action taken, and action taken to prevent future failures to obtain consent prior to award.

e. When consent/ratification is denied, figure 3 will be changed. The contractor will be advised that his/her consent/ratification is denied, and reasons for denial with instructions as to actions to be taken. In the event a ratification request is denied, the contractor will be advised that the cost expended under that subcontract will not be allowed.

Figure F-1 (Cont'd)

Solicitation/Subcontract Review-Office Engineering Branch Checklist

Contract: DACW45-89-D-0504, Delivery Order 3, Hydrazine Blending & Storage Facility, Rocky Mountain Arsenal, Denver, Colorado

SUBCONTRACTOR:

Subcontract No.
Bid No.
Wad No.

1. Consent ratification to the above subcontract is based on the following:

	YES	NO	N/A
a. Is the requirement necessary?	___	___	___
b. Was purchase description adequate: If answered no - why? _____ _____	___	___	___
c. Has subcontractor been approved by the contractor?	___	___	___
d. If sole source, is the justification for sole source procurement acceptable?	___	___	___
e. Are data requirements specified?	___	___	___
f. Was solicitation issued timely to facilitate procurement and delivery to site?	___	___	___
g. Did the contractor prepare an independent estimate for each line item of the solicitations?	___	___	___
h. Was adequate time allowed for procurment, production, and delivery?	___	___	___
i. Was adequate time allowed for preparation and submission of offers?	___	___	___
j. Were socioeconomic requirements considered in the award decision including EEO compliance review $1,000,000.00 or more)?	___	___	___

Figure F-2

	YES	NO	N/A
k. Were the evaluation factors in the solicitation adequate and followed in the award decision?	___	___	___
l. Was solicitation submitted for review prior to issuance?	___	___	___
m. Was contractor's action to determine the subcontractor responsible adequate?	___	___	___
(1) Is the subcontractor on the debarred, ineligible and suspended listing?	___	___	___
(2) Is the subcontractor on the EEO program listing of non-awardable contractors?	___	___	___
n. Has a price analysis been made?	___	___	___
(1) If yes, has the analysis been made?	___	___	___
(2) If no, should it have been made?	___	___	___
o. Is the selection based on adequate competition?	___	___	___
p. If competitive, is proposed award to lowest offeror?	___	___	___
q. Were negotiations conducted?	___	___	___
r. Is the memorandum of negotiation adequate?	___	___	___
s. Was abstract properly prepared and adequate?	___	___	___
t. Is Public Law 87-653 applicable to the subcontract?	___	___	___
(1) If yes, was DD Form 633/633-7 Title (or equivalent) obtained?	___	___	___
(2) Has the certificate of current			

Figure F-2 (Cont'd)

	YES	NO	N/A
cost or pricing data been received/requested?	___	___	___
(3) Are there any known sub-tier procurements over $500,000.00?			
(4) Was audit of cost and pricing data performed?	___	___	___
u. Are Government-furnished facilities (including special tools, patterns, etc.) required:	___	___	___
v. Type of subcontract_____. If other than Firm Fixed Price, is type acceptable?	___	___	___
w. Was the proposed subcontractor responsive to the solicitation?	___	___	___
x. Are the subcontract general provisions, terms, and conditions acceptable?			
y. Is payment clause adequate to prevent loss to the prime contractor to the Government from premature payments?	___	___	___
z. Was file complete and correct?	___	___	___

(1) Other areas checked:

(a) _____

(b) _____

(c) _____

(d) _____

(e) _____

(f) _____

(2) Engineer review was made by _____
(Name & Office Symbol)

Figure F-2 (Cont'd)

who has indicated in writing that the proposed subcontract is acceptable.

(3) Construction review was made by _____
(Name & Symbol)
who has indicated in writing that the proposed subcontract is acceptable.

(4) Procurement review was made by _____
(Name & Symbol)
who has indicated in writing that the proposed subcontract is acceptable.

2. My review indicated the price is satisfactory for the following reasons:

3. Recommend consent be _____granted_____denied for the following.

_____
Civil Engineer

Figure F-2 (Cont'd)

Solicitation/Subcontract Review
Technical Checklist

Solicitation or Subcontract/Cost Account No._____

Description_____

	YES	NO	N/A
a. Does the solicitation conform to the scope of work and schedule requirements of the delivery order?	___	___	___
b. Does the solicitation conform to applicable design drawings and specifications?	___	___	___
c. Have shop drawings and other submittals been requested	___	___	___
d. Is material of domestic origin?	___	___	___
e. Have optional methods of construction or optional materials been provisioned in the solicitation?	___	___	___
f. Should options be provisioned?	___	___	___
g. Is the stated completion date acceptable	___	___	___
h. Does the solicitation adequately cover quality control procedures?	___	___	___
i. Is the proposed cost within budget?	___	___	___

REMARKS: _____

_____

_____

Concur_____ Nonconcur_____

_____ _____
Project Engineer Date

Figure F-3

Authorized Representative of the Contracting Officer Letter

Letter No._____
Date_____

SUBJECT: Consent to Subcontract(s) under Prime Contract No. DACA45-89-D-0504

TO:

Submitted herewith for consent of the Contracting Division is/are the listed subcontract(s) and/or change(s) hereto. these items are required for performance of work under the subject prime contract. These subcontracts have been made at the most advantageous prices available with due regard for quality and delivery.

Supplier	Subcontract No.	Type of Subcontract	Total Dollar Amount of Subcontract

_____
(Signature of Contractor)

Consent is hereby given to the placement of subject proposed subcontract(s) conditioned upon the information furnished by the contractor to the Government, and subject, however, is the clauses contained in the prime contract and any obligations or responsibilities the contractor may otherwise have under this contract or the law. This consent shall neither create any obligation of the Government to, nor privity of contract with the subcontractor or supplier, and shall be without prejudice to any right or claim of the Government under the prime contract. this consent does not constitute a determination as to the acceptability of the subcontract price or the allowability of costs. Consent herein shall not be construed as authorization to expend overtime.

_____ _____
Authorized Representative of the Contracting Officer — Date

Figure F-4

Letter No.:_____
Date:_____

SUBJECT: Ratification to subcontract(s) under Prime Contract No. DACA45-89-D-0504

TO:

Submitted herewith for ratification of the contracting officer is/are the listed subcontract(s) and/or change(s) thereto. These items are required for performance of work called for under subject prime contract. These subcontracts have been made at the most advantageous prices available with due regard for quality and delivery.

Supplier	Type of Subcontract	Total Dollar Amount of Subcontract

Reasons why consent was not requested:_____

_____

Who (by name) was responsible:_____

following action has been____will be____taken to prevent a recurrence:

_____

_____
Signature of Contractor

Figure F-4

Letter No. _____
Date _____

TO:

Ratification is hereby given to the placement of subject subcontract(s), conditioned upon the information furnished by the contractor to the Government; however, it is also subject to the clauses contained in the prime contract and any obligations or responsibilities the contractor may otherwise have under this contract or the law. This ratification shall neither create any obligation of the Government to, nor privity of contract with the subcontractor or supplier, and shall be without prejudice to any right or claim of the Government under the prime contract. This ratification does not constitute a determination as to the acceptability of the subcontract price or the allowability of costs. Ratification herein shall not be construed as authorization to expend overtime.

_____ _____
Authorized Representative of the Contracting Officer — Date

Figure F-4 (Cont'd)

APPENDIX G

Technical Direction - FECR Procedures

1. Introduction. This appendix provides sample facility engineering change request procedures for use when reviewing and approving change requests. The FECR process may be used in lieu of the WAD procedures RFP process (see appendix C) when approved.

2. List of Figures.

a. Figure G-1, Facility Engineering Change Request (FECR) Procedure.

b. Figure G-2, FECR Processing.

c. Figure G-3, Change Control Board Members.

Facility Engineering Change Request (FECR) Procedure

1. General. After the establishment of the baseline all changes to the scope of the project will be processed in accordance with this procedure. the procedure for change review and approval will vary depending on the classification of the FECR. A master FECR log will be maintained by the Corps of Engineers.

2. FECR Classification.

a. Class 1. Class 1 FECR's are user originated. These FECR's will be funded from management reserve if additional funding is required.

b. Class 2. A Class 2 FECR is any change originated by the Omaha District or Rocky Mountain Area office that meets the following definition: A mandatory change that must be made for the project to function. It includes: changes required when actual conditions found on the construction site are not compatible with plans and specifications; unknown and unforeseen conditions make change necessary; or technical errors or omissions in the plans and specifications that must be corrected. Any change to contract documents determined to be necessary by Weston will be submitted to the resident engineer by serial letter for preparation of the appropriate FECR. If additional funding is required it will be obtained from the project contingency fund.

3. Change Priorities. Each class of change will be categorized according to the following priorities:

a. Emergency Change. An emergency change is any change which must be issued immediately for implementation in order to: (1) avoid construction delays or stoppages; (2) prevent subsequent reconstruction; or (3) correct construction safety conditions which could result in serious injury to personnel or extensive damage or destruction of equipment.

b. Urgent Change. An urgent change is any change that requires expedited processing; (1) to correct potentially hazardous conditions; (2) to avoid reconstruction; or (3) to avoid schedule delay.

c. Routine Change. A routine change is any change not classified as "emergency" or "urgent".

Figure G-1

4. Type of Changes.

a. Changes to scopes within the funding limits of the delivery order will be handled using the FECR. All FECR's will be approved by the members of the Change Control Board. No modification will be written for these changes.

b. Changes to scope that will increase the funding limits of the delivery order will be handled using a FECR. The change will be executed by a modification. A modification will be processed any time contingency or management reserved is used, as well as to request funds after these sources have been exhausted.

c. Changes to the funding limit without a change to the scope of work will be a modification to the delivery order funding limit.

d. Changes that are considered "outside the scope" of the delivery order will be by a new delivery order, negotiated, and executed by the area office or the District Office.

Figure G-1 Cont'd)

FECR Processing

1. Class 1 FECR.

a. The Rocky Mountain Arsenal Project Manager for this project will request the change in writing. The request shall include a detailed description of the change and any cost or schedule restraints which may be applicable. The request will be forwarded to the Denver Resident Office, Resident Engineer, for preparation of the FECR for approval.

b. The FECR form will be prepared by the Corps of Engineers and forwarded to the contractor for cost and schedule input. A copy will also be forwarded to Office Engineering Branch (OEB) for preparation of the necessary Government estimate.

c. Upon receipt of cost and schedule information from the contractor the estimates and scheduled will be reviewed by OEB and Denver Resident Office (DRO) as applicable. The FECR form will be completed and distributed to the members of the Change Control Board.

d. The Change Control Board will review the FECR at a regularly scheduled meeting or at a special session if the proposed FECR is of the emergency or urgent nature. Each member of the board is responsible for obtaining whatever cost, reschedule, or technical support they feel is appropriate.

e. Copies of the approved/disapproved FECR's, which do not increase the delivery order funding limits, will be forwarded to each board member and OEB. The contractor's copy will include direction to proceed with the change.

f. Approved FECR's which require an increase to the delivery order funding limits will be forwarded to OEB for preparation of a contract modification. A copy of the executed modification and FECR will be forwarded to each board member. For these changes the contractor shall not proceed until an executed modification is received.

2. Class 2 FECR.

a. These FECR's will be originated by the Corps of Engineers. They will be funded from project contingencies if additional funding is required.

Figure G-2

b. A FECR form will be prepared by the Corps of Engineers and forwarded to the contractor for cost and schedule input. A copy will also be forwarded to OEB for preparation of the necessary Government estimates.

c. Upon receipt of cost and schedule information from the contractor the estimate and schedule will be reviewed by OEB and dro as applicable. The FECR form will be completed and distributed to the members of the Change Control Board.

d. The Change Control Board will review the FECR at a regularly scheduled meeting or at a special session if the proposed FECR is of an emergency or urgent nature. Each member of the board is responsible for obtaining whatever cost, schedule or technical support they feel is appropriate.

e. Copies of approved/disapproved FECR's which do not increase the delivery order funding limits will be forwarded to each board member and OEB. The contractor's copy will include direction to proceed with the change.

f. Approved FECR's which require an increase to the delivery order funding limits will be forwarded to OEB for preparation of a contract modification. A copy of the executed modification and FECR will be forwarded to each board member. For these changes the contractor shall not proceed until an executed modification is received.

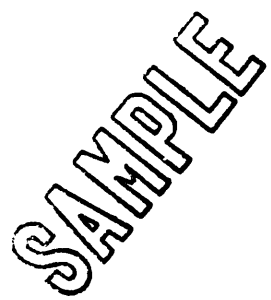


Figure G-2 (Cont'd)

Change Control Board Members

Government: U.S. Army Corps of Engineers

Denver Resident Office - Resident Engineer, (Chairman)

Engineering Liaison to Rocky Mountain Arsenal

Contractor: Weston - Project Manager

Customer: Rocky Mountain Arsenal - Project Manager

Figure G-3

APPENDIX H

Earned Value Charts

1. Introduction. This appendix provides sample charts incorporating standard terminology based upon earned value techniques of reporting. See ER 5-7-1 (FR), 1 March 1991, for additional information. Earned value reporting is not mandatory beyond that incorporated in WAD and Work Item Procedures, Appendix C and D respectively.

2. List of Figures.

a. Figure H-1, Basic Relationships of the Earned Value Criteria.

b. Figure H-2, Forecasting Overruns of Schedule and Cost Using Earned Value Criteria.

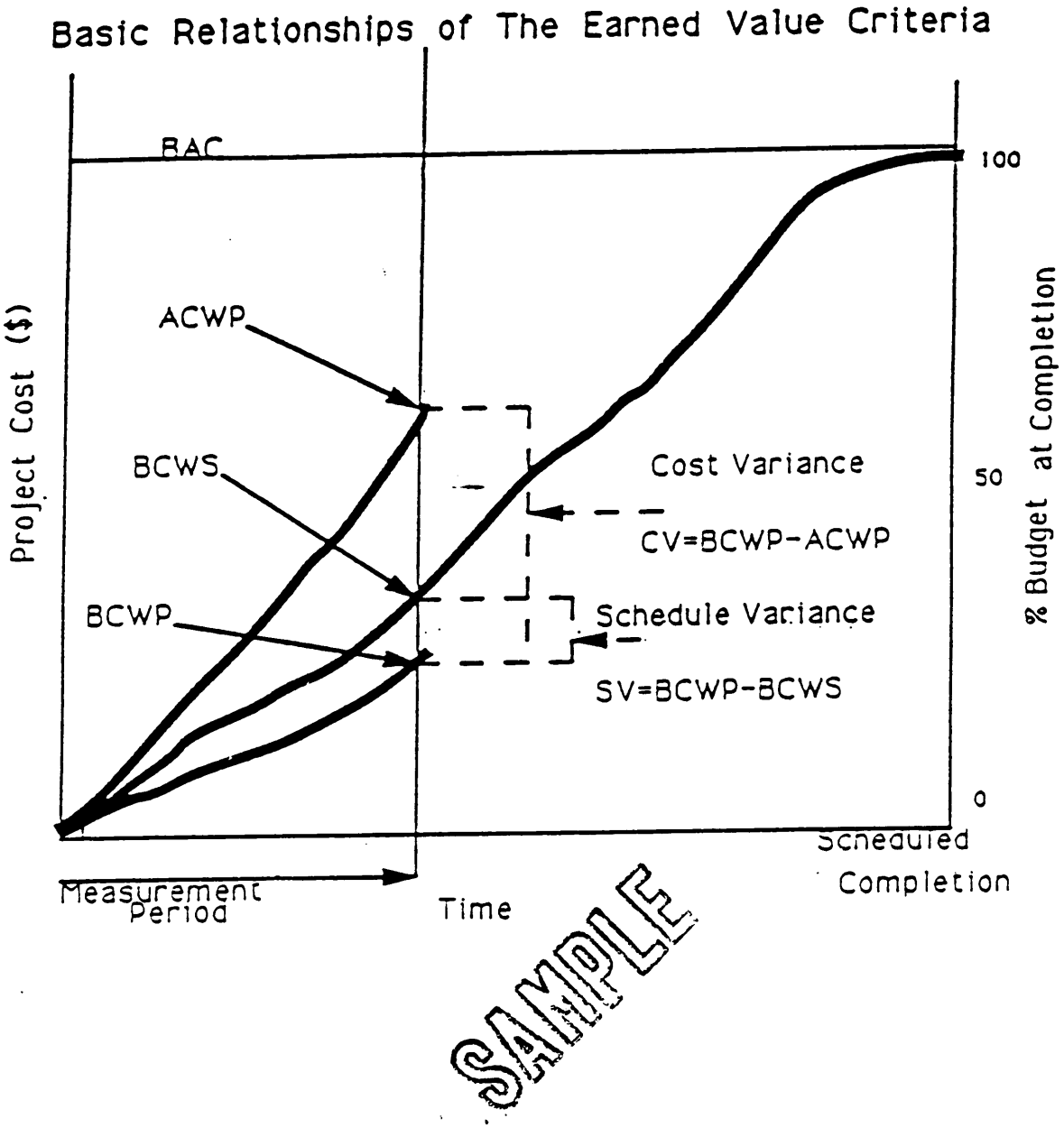

Basic Relationships of The Earned Value Criteria
BAC
100
ACWP
BCWS
BCWP
Cost Variance
CV=BCWP-ACWP
Schedule Variance
SV=BCWP-BCWS
50
0
Project Cost ($)
% Budget at Completion
Scheduled
Completion
Measurement
Period
Time
SAMPLE

Figure H-1

Forecasting Overruns of Schedule and Cost Using Earned Value Criteria

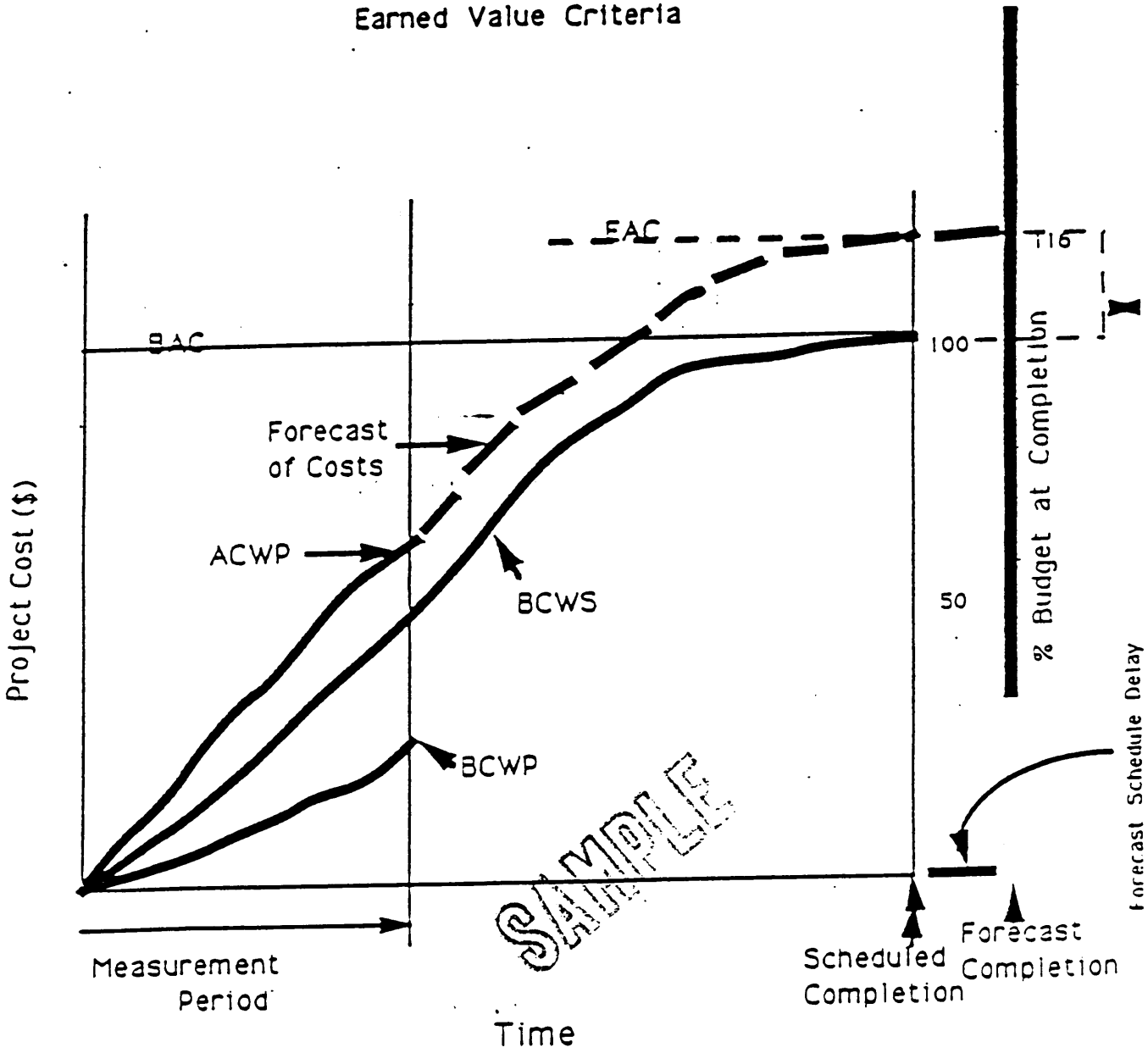


Figure H-2

APPENDIX I

Advance Agreements Listing

1. Introduction. Advance agreements are critical to the day-to-day operation of the cost reimbursement contract. Incorporation of detailed contractor business procedures and work plans in conjunction with Corps of Engineers construction contract management is provided in these agreements. Determination of required advance agreements is made during the planning phase of acquisition.

2. Figure 1, List of Advance Agreements.

List of Advance Agreements

Personnel and Company Policies
Small Business and Small Disadvantaged Business Plan
General and Administrative Overhead Costs
Logistics Management (Procurement) Plan and Procedures
Property Management System
Mobilization/Demobilization
Overtime Policy
Management Information System
Construction Management Plan
Equipment Costs
Indirect & Overhead Applications (Excluding G&A)
Insurance
Payment
Key Personnel
Fee
Manpower Utilization
Craft Labor Rates
Phased Manpower Staffing
Office Facilities and Services
Warranties
Field Office WAD Costs
Contract Closeout
Work Allocations Directives

Figure I-1